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The Business Quarterly

WINTER 1959 | VOLUME XXIV NUMBER 4

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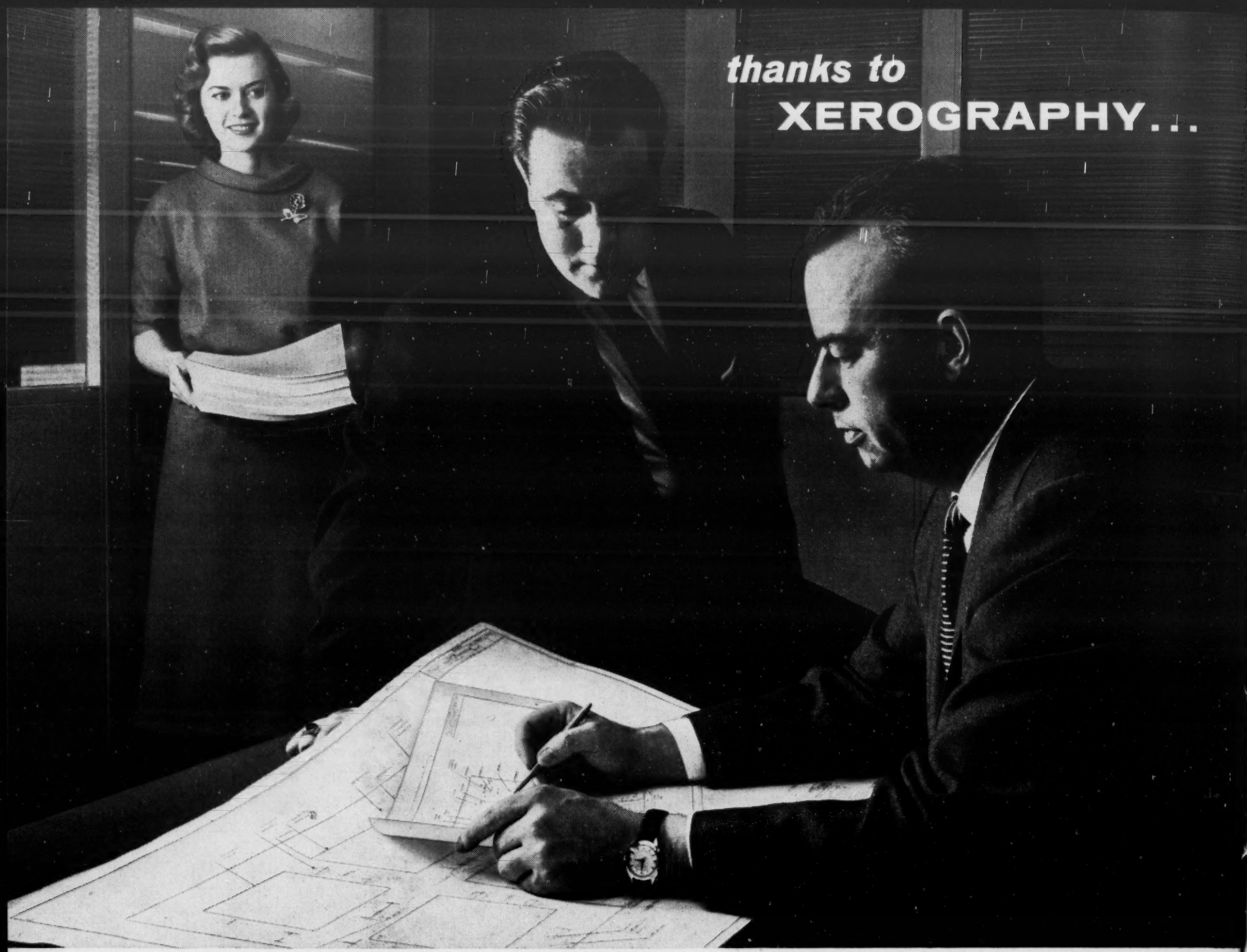

Robert Harding, right, assistant chief engineer of Arma division, American Bosch Arma Corporation, points out to Frank McShane, cost-improvement expert, the high quality and contrast of an 11″x17″ stock print reduced from an original 22″x34″ drawing. The print is a sample of many run off on an offset duplicator from an inexpensive offset paper master prepared xerographically by XeroX Model 1218 copying equipment.

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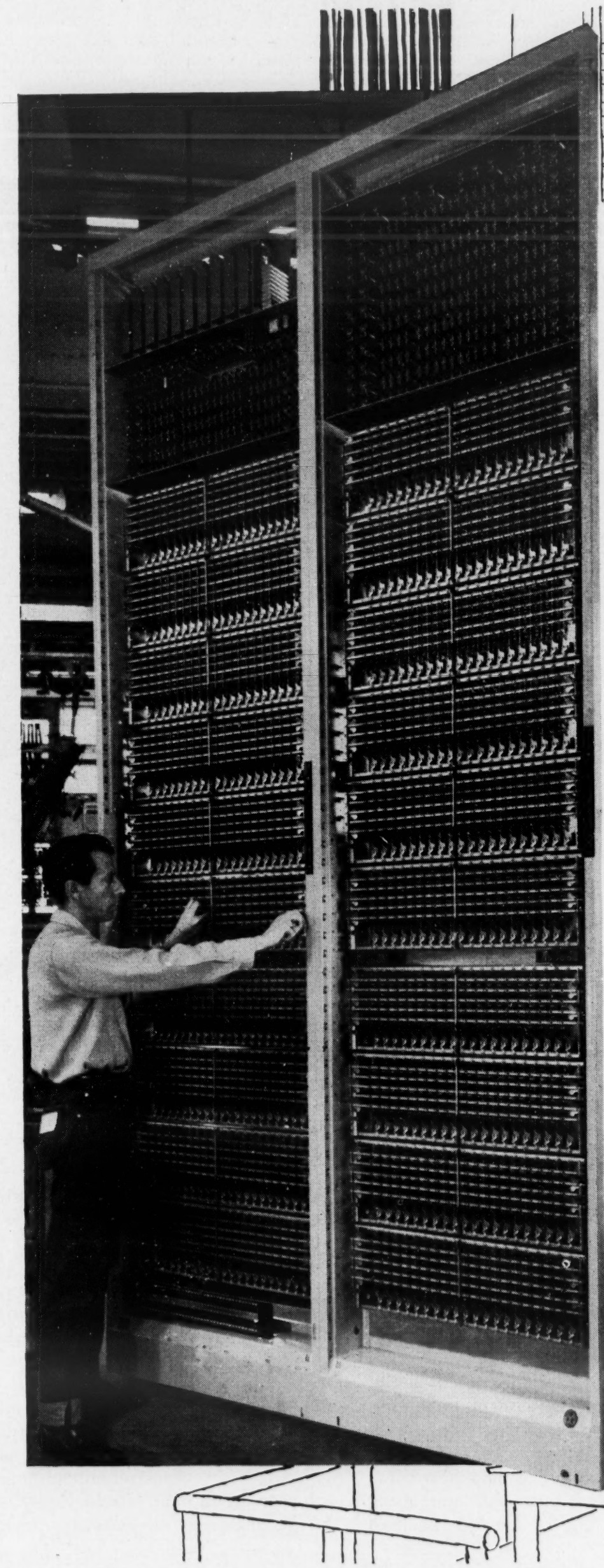

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THE
BUSINESS QUARTERLY

VOLUME XXIV NUMBER 4 — WINTER 1959

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Some Perspective Needed

The case of Mr. Jack Cadieux has now become a *cause célèbre*, and rightly so. Perhaps the injustice that has been exposed will result in some change for the better in our outdated municipal bylaws governing business operations.

Mr. Cadieux is the Ottawa service station proprietor who was recently fined $1,312 or eight months in jail for operating his service station after the hours stipulated in the city's bylaw. No one can deny that Mr. Cadieux broke the law and must suffer the penalty. But the existence of iniquitous bylaws such as these in the first place is a sad commentary on the thinking of some of our businessmen and legislators.

In general, our provincial statutes require that a city council pass a bylaw restricting hours of opening if a majority (often 75%) of the merchants in the trades affected request such restricted hours. The bylaw is binding on all merchants in those trades.

On the surface, this seems quite plausible, if you overlook the rights of the other 25% who may disagree. The merchants argue that they can't get help to work late hours, that they are entitled to some time off themselves, and that restricted hours don't cut down on trade but merely shift it into a set pattern of hours. Therefore, it is only fair to the merchants to limit hours to suit their convenience.

But when you subject this argument to close scrutiny, you open up a Pandora's Box of contradictions. Who would ever claim that business should be run to suit the convenience of the merchant? Surely the consumer's benefit is the only criterion that is pertinent here—not the comfort of the individual retailer. If consumers wish to shop at night and there is someone who is willing to stay open to serve them, who is to say them nay? To prevent this happening in the name of justice only makes a mockery of that term. These retail groups are nothing less than combines in restraint of trade which are clearly detrimental to the consumer interest, yet we have the supreme illogic of legal sanctions being given such combines.

Aside from their infringement on the freedom of both consumers in general and individual merchants in particular, the municipal bylaws are difficult, if not impossible, to enforce fairly, and have a discriminatory and undesirable effect on trade. For example, in one Ontario city, the hardware, appliance and furniture dealers have succeeded in having an early-closing bylaw passed closing stores on Saturday afternoon. But where does a hardware store end and an auto supply store begin? How can you draw the line here? Should department stores close their appliance, hardware and furniture departments? They don't, of course, with the result that the business goes there instead of to specialty hardware merchants who would like to stay open but are forced to close against their will.

Clearly, then, it is high time that other communities followed the lead recently taken by Toronto in scrapping these outmoded bylaws. And it is even more important that businessmen scrap the foolish notion that business somehow exists for their convenience and comfort. Businesses exist to serve the consumer and should survive only so long as they do just that.

—D. S. R. LEIGHTON

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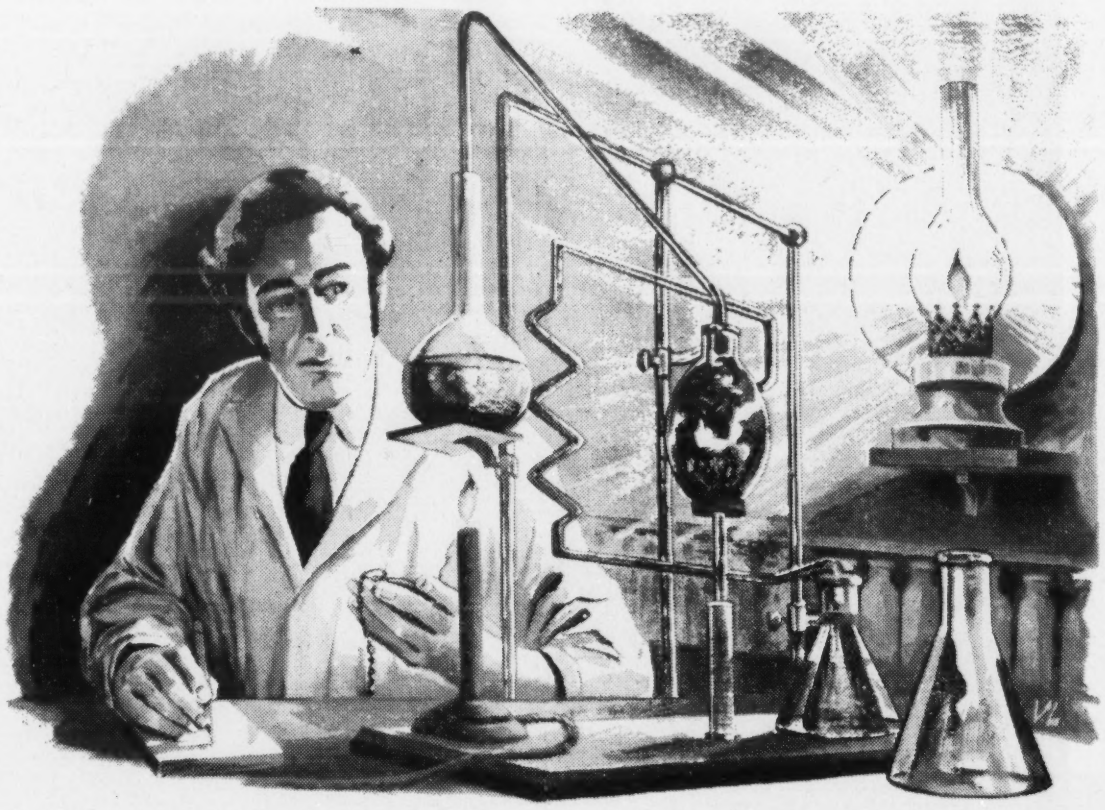
(continued on page 199)



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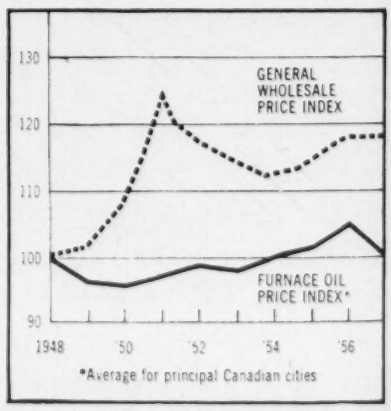

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About Our Authors cont.

with the Civilian Atomic Power Department on its formation in May, 1955. He has also been Manager of Manufacturing, Isotope Products Ltd., and Contracts Administrator of the Telecommunications Department, Rogers Majestic Electronics Limited.

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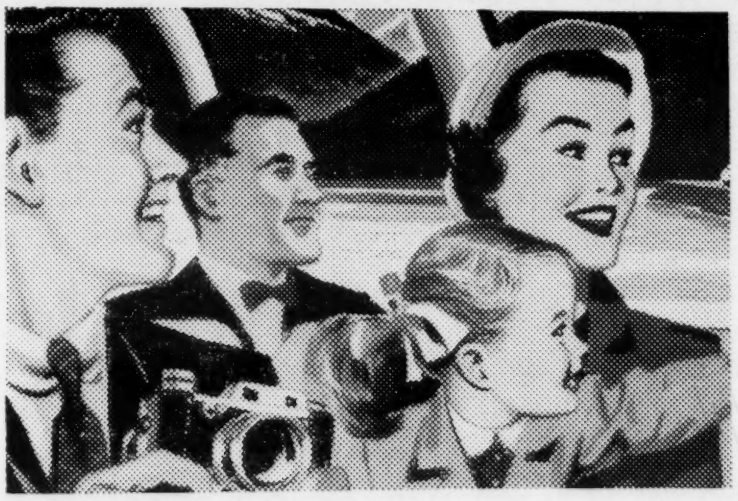

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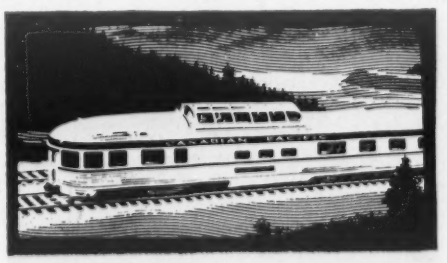

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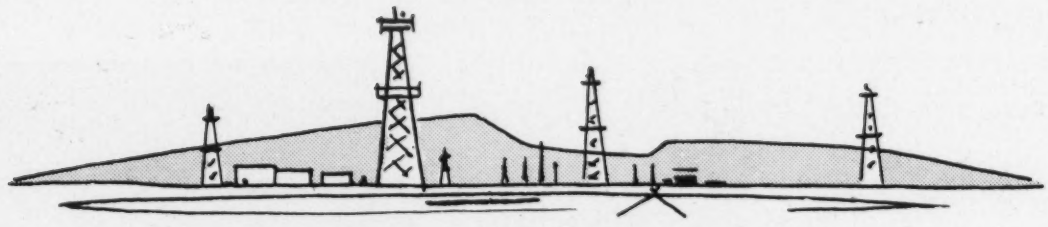
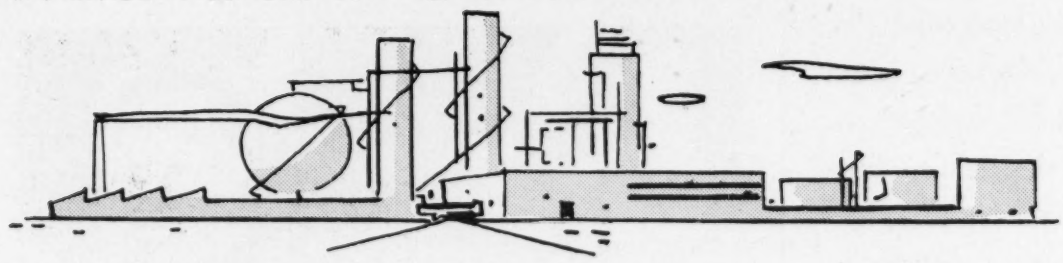


to refinery



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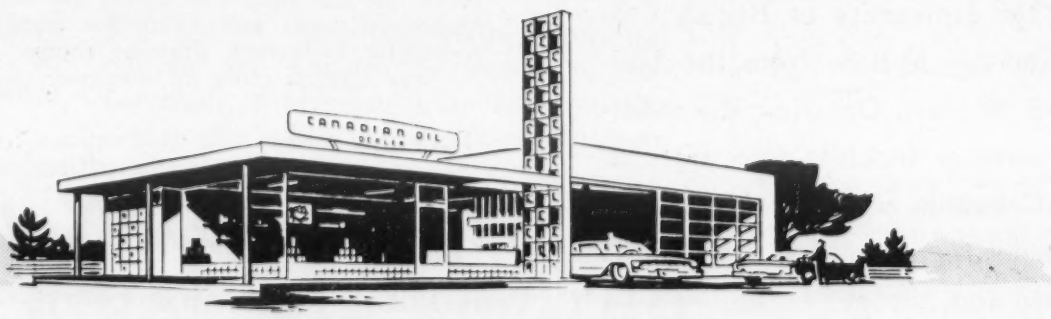

Ottawa Newsletter

PATRICK NICHOLSON

Every businessman will agree with the management of Canada's biggest business as to the desirability of hiring the best available employees. And every taxpayer, being a shareholder in "Canada Unlimited", surely supports the management, namely the federal government, in asking Parliament to approve a wage scale designed to match the attractions offered by rival employers.

In these circumstances, it has come as a shock to many thinking "shareholders" to learn that their employees are dissatisfied by the rejection of their request for a wage increase. Just how do present wage scales compare with wages elsewhere?

The taxpayer employs nearly 500,000 men and women, or about 8% of Canada's working force. These include, in round numbers, 155,000 classified civil servants, who are the white collar workers, from deputy minister to junior typist. It is this group which is now seeking a wage increase.

There are 30,000 "prevailing rate" workers, who are the manipulative or blue collar workers employed —often on a long-term basis—as tradesmen or labourers by different departments. As their name implies, they receive the wage for the job prevailing locally.

There are 15,000 "casuals", hired locally on an ad hoc basis for specific jobs of short duration, and normally paid at the prevailing local rate.

There are 145,000 employees of the 24 Crown Corporations. Most of these are members of unions which bargain for wages matching local rates in private industry, using the strike weapon at option as recently occurred at Polymer Corporation in Sarnia.

Finally there are 120,000 members of the Defence Services and 5,500 R.C.M.P., whose wages are usually adjusted with those of classified civil servants.

The latest pay increase for the civil service proper was granted in midsummer 1957. That was the seventh increase within 10 years. They ranged from 10% to 6%, and their cumulative effect was an increase of over 70%. During the same period, the Cost of Living index rose by less than 36%. Apart from such general increases in the rates, the civil servant receives annual wage increases within the rate for his grade, and is always able to compete for promotion to a higher-paid grade.

The present pay scales range from $23,000 for the top deputy minister, to $1,650 for a junior clerk or typist. The average weekly pay in August was $77.64; at that time the average weekly pay in industry across Canada, comprising managing director to labourer, was $73.71.

The typical civil servant works a 37½-hour week. After 18 months, he is entitled to three weeks annual holiday with pay; after 12 months he is entitled to three weeks paid sick leave per year, which may be carried forward if unused; he enjoys 10 statutory holidays with pay. At age 65, or five years earlier at his option, he may retire on a pension of up to 70% of his retiring wage. His widow and children under 18 years each receive respectively annuities of 50% and 10% of his pension. His employer, the taxpayer, contributes more than half to the pension fund.

In contrast, the typical industrial employee works a 41-hour week; receives two weeks paid vacation, no paid sick leave, and only eight paid statutory holidays. Employer pension contributions are not usual, and seldom on a scale as generous as to the civil service pension fund.

It would tease an economist to calculate a true wage index for civil servants and industrial workers, taking account of actual pay, differing hours and conditions of work and fringe benefits. But such an index would probably show that the civil servant enjoys a premium of more than 20% in his remuneration.

This is not to overlook that some classes are receiving an inequitably low wage, while individuals, especially in the higher echelons, might earn higher salaries in business.

If conditions in the civil service are as unattractive as protests indicate, we would expect civil servants to be quitting in droves, to accept more attractive employment in industry. However, their numbers quadrupled between 1939 and 1958, while last year 90,000 applications were received at the enquiry office here, and 21,000 were accepted to replace the 7,500 who quit and an equal number who died or were pensioned.

In addition to what is "quite possibly the lowest separation rate since before the war", 1,500 university graduates applied for 250 jobs in the foreign service, administrative, finance and engineering categories.

Far from accepting the slur that he is "a mean employer", the taxpayer may decide after study that the civil service which he employs is over-paid, over-staffed and over-privileged — at least in comparison with his own job.

Washington Newsletter

JAMES M. MINIFIE

PROTECTION PROTECTS WHOM?

A presidential election year is opening, which means that internal politics will dominate most scenes, that the voice of reason will be heard but not always heeded, and that the greatest good of the great number will sometimes be interpreted as whatever would be best calculated to return the greatest number of the 435 Congressmen and 33 Senators currently contesting their seats.

This is Congressional protectionism, and it is only one facet of a phenomenon of growing importance.

Protectionism is a deep tide in the United States and it runs fast. It influences actions and attitudes both in internal and external relations. From more liberal days, however, enough disrepute still clings to the name to make its use disadvantageous. It flourishes under synonyms.

The great steel strike which has so disrupted the American economy was an essay in protectionism. Management sought to protect and preserve the unparalleled profits which the the industry has squeezed out of a hungry market in a succession of price increases which more than offset the pay rises which gave their excuse. Labour sought to protect wages and jobs threatened by automation even, as Management charged, at the price of "loafing and featherbedding". There was some truth in these charges; it was also true, however, that the steel industry contemplated fast technological changes which would have abolished many jobs. This is the trend of industrial history; but the trend of social consciousness no longer permits so crude an application of *laissez faire*.

In this clash of giants, only the public interest went unprotected. As that became apparent, Congressmen prepared remedies, potent remedies compounded from that snake-oil recipe which works so tellingly in presidential election years.

Another striking application of protectionism in disguise was promoted by the U.S. Treasury. It introduced "a major policy innovation" by declaring that borrowers from the Development Loan Fund must spend the proceeds in the United States. The Development Loan Fund was set up to give foreign economic aid the new look; loans were to be substituted for grants on the theory that this was a return to normal, would get borrowers into the habit of more cautious spending, and perhaps encourage private investors in foreign lending.

The U.S. Treasury, however, appears to be obsessed by the continued outflow of gold, and to be bemused by the coincidence that it almost exactly equals the total of foreign aid in cash and kind, military and economic. Congress appropriated 1.4 billion dollars in cash for the Development Loan Fund in 1959; of this, 885 million had been committed when the new policy was announced; it will not apply to these funds.

The new regulation is "buy American" with its face lifted, but no more attractive for that. It would mean that the borrower gets anywhere from 15 to 50 percent less for his money. If he were buying hydroelectric generators, for example, he would have to get them from Westinghouse or Lima-Baldwin-Hamilton, to whom he would pay more than 9 million dollars instead of from John Inglis and Co. of Toronto where he would pay 6 million dollars. Thus, he would be paying 50 percent more for basic equipment. This would permanently affect the cost of power, a vital item in his plans for industrialization and better living conditions.

The Treasury tricks its protectionism out with the plea that it cannot be expected to finance competitors in the world market, and that major trading nations such as West Germany and Japan should and could finance their own exports.

But this only glosses over the fact that American industry, like mining and agriculture, has priced itself out of the world market. Whether it be steel or wheat, copper or cotton, turbines or textiles, the American producer either cannot or will not meet world competition. The farmer is subsidized. The miner is subsidized. The manufacturer, already protected by the baffles of customs regulations, demands further protection, always at the expense of the consumer, native or foreign.

Those considerations, rather than foreign aid, account for the unbroken series of annual deficits in United States trade with the rest of the world.

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Poll of Executive Opinion

Business Prospects for 1960

This is the 10th year that The Business Quarterly has conducted its Poll of Executive Opinion to assess businessmen's forecasts of sales, costs and profits for the coming year. As an indicator of the climate of opinion in which operating plans are being formed, the Poll is one factor which can be useful to the Canadian businessman. This year's results are outlined below.

J. N. Fry and Alexander Mikalachki

The tenth annual poll of Canadian Executive Opinion reveals that its members expect the general trend of business activity in 1960 to parallel 1959. Since for the most part this report is intended to be merely another piece of evidence for the businessman in making his planning decisions, the data received in response to the Poll are presented without evaluation or interpretation. However, some general conclusions are clearly depicted by the data:

1. Most executives are of the opinion that the level of the general economy will rise in 1960: prices will increase, employment will remain constant or increase; wages will increase.

2. Production, sales and profit increases are anticipated by most companies.

3. Capital expenditures will for the most part remain at the same level or will be slightly higher in 1960 as opposed to 1959.

CROSS SECTION OF INDUSTRIES POLLED

The total number of replies, the size of firms polled, and their type is shown in Table I. In contrast to the previous year's poll, the proportion of large firms to medium and small firms represented in our response was somewhat different. However, the proportion of manufacturing to non-manufacturing firms was the same as in the previous year.

TABLE I

Total Number of Replies, Size and Type of Industries Surveyed

	Poll #9 For 1959	*Poll #10 For 1960*
i. Total number of replies	139	113*
ii. Size of industry—		
Large firms	55%	50%
Medium-sized and small	45%	50%
iii. Type of firm—		
Manufacturing	73%	73%
Non-manufacturing	27%	27%

*Replies were cut off at a somewhat earlier point in Poll #10 than in the previous poll.

Table II, on the other hand, indicates the breakdown of industries responding, that is, both the number in the industry and the percent that number is of the total companies answering.

TABLE II

Breakdown of Industries Responding

	No. of firms	*% of all companies*
Food and kindred products	12	11
Iron and steel and products	10	9
Electrical equipment and products	10	9
Finance, insurance and real estate	10	9
Pulp, paper and printing	9	8
Chemicals and allied products	8	7
Textiles and apparel	7	6
Machinery	7	6
Transportation and storage	5	4
Trade, wholesale and retail	5	4
Leather and leather products	3	3
Mining	3	3
Petroleum and fuels	3	3
Lumber and finished lumber products	2	7
Stone, clay and glass products	2	
Construction and building materials	2	
Public utility	2	..
Other manufacturing	9	8
Other service	4	3
	113	100%

The Executives surveyed were asked their general opinions on trends in two broad areas: (1) the trends of the indices which depict our national economy and (2) the expected performance of their individual companies in 1960. The significance in these opinions lies in comparing them to 1959 expectations, and noting the relative degree of change. Table III shows a summary of these findings compared with those of last year.

Table IV depicts the expectations of executives in particular industries regarding sales and earnings. The reader is cautioned to relate these results to the number of companies representing the industry, and to evaluate their significance for himself.

PERSONAL COMMENTS

Many executives included personal comments regarding both the economy and their individual firm's activities. Some of these comments are included below to give a qualitative background to the foregoing data:

"I feel strongly that present efforts to prevent further serious inflation will be continued and ultimately prove to be successful in the economy as a whole." (Medium-sized Banking, Investment and Loan).

TABLE III

Comparison of Businessmen's Expectations for 1959 and 1960

INDICES	*INCREASE*		*CONSTANT*		*DECREASE*	
	1959(%)*	1960(%)	*1959*(%)*	1960(%)	*1959*(%)*	1960(%)
Consumer Price Index	75	60	24	38	1	2
Wholesale Price Index of Industrial Materials	55	59	44	39	1	2
Index of Industrial Employment	56	43	41	51	3	6
Index of Industrial Production	61	53	37	42	2	5
Wages and Salaries of Industrial Workers	90	89	9	10	1	1
INDIVIDUAL COMPANIES						
Total Unit Sales	74	77	23	15	3	8
Total Physical Volume	75	78	22	15	3	7
Earnings before Taxes	54	62	34	26	12	12
Production for Inventory	18	26	76	62	6	12
Orders for Raw Material	68	65	28	26	4	9
Prices for Raw Material Purchases	51	46	45	51	4	3
Prices of Products	34	23	61	75	5	2
Average Labour Force	26	34	67	57	7	9
Number of Salesmen	31	43	67	56	2	1
Wages Paid	88	88	12	12	0	0
Advertising Expense	32	35	65	64	3	1
Capital Expenditures for Maintenance	23	38	60	49	17	13
Capital Expenditure for Expanding Plant	27	38	43	42	30	20

*1959 Data from Ninth Poll of Executive Opinion, *The Business Quarterly*, Winter, 1958.

TABLE IV

Anticipated Sales and Earnings in the Responding Industries

INDUSTRY	*EXPECT SALES TO*			*EXPECT EARNINGS BEFORE TAX TO*		
	Increase	*Stay Constant*	*Decrease*	*Increase*	*Stay Constant*	*Decrease*
Food and kindred products	83%	17%	....	42%	50%	8%
Iron and Steel products	40%	30%	30%	66%	11%	23%
Electric equipment and products	80%	....	20%	50%	40%	10%
Finance, insurance and real estate	70%	20%	10%	78%	11%	11%
Pulp, paper and printing	87%	13%	....	55%	34%	11%
Chemicals and allied products	88%	12%	....	100%	....	....
Textiles and apparel	86%	14%	....	57%	29%	14%
Machinery	100%	....	....	86%	14%	....
Transportation and Storage	Most	Some	Some	Some	Most	Some
Trade — wholesale and retail	Most	Some	None	Most	Some	None
Leather and leather products	All	None	None	Most	Some	None
Mining	None	All	None	Some	Most	None
Petroleum and Fuels	All	None	None	Most	Some	None
Other areas	Sample too small to draw any inference					

"I expect the Consumer Price Index may continue about the same level in 1960, but at the same time expect an increase in wages and salaries and in the Wholesale Price Index of Industrial Materials. Frankly, I don't think the increase in wages and salaries will be very significant, nor do I expect the Wholesale Price Index will rise very high. I think the force of competition at the retail level should be the main factor in helping to hold the Consumers Price Index at about the same figure as in 1959." (Medium-sized Chemical and Allied Products).

"1960 volume of available business will be large but industrial productive capacity increase is much greater . . . with result competition will be very keen, driving prices below costs. Only solution is new and better products to sell profitably." (Medium-sized Lumber and Finished Lumber Products).

"We anticipate our volume of production and sales will be greater in 1960, but that our profit will remain at 1959 levels." (Medium-sized Electrical Equipment and Products).

"The results in 1960 can be considerably affected by what action, if any, our Government takes in regard to flood of Japanese textiles coming into this country." (Medium-sized Textile and Apparel).

"A large part of our business is export to the U.S. and the relationship of the U.S. dollar to the Canadian dollar has a material effect on net sales dollars realized and net profit." (Large Pulp, Paper Products and Printing).

"Some consideration might be given to . . . the effects of foreign imports. In the shoe manufacturing industry I anticipate that in the next three years there will be a very serious challenge presented by imports from Japan. This will be felt particularly by manufacturers in the popular price field." (Medium-sized Leather and Leather Products).

"Our plans are to increase sales—production—reduce staff by addition of more modern equipment and reduce inventory due to method changes in final order preparation." (Medium-sized Textiles and Apparel).

"Capital expenditures for maintenance and expansion are smaller than in 1959 because of having just completed a move into a new office and plant. Our day of expansion is over for the time being!" (Large Chemicals and Allied Products).

CONCLUSION

For the most part, the interpretation of the data, as has been stated earlier, has been left to the reader. The authors wish only to reiterate the obvious generalizations which arise from the findings—businessmen expect that the outlook for 1960 will be for continued economic expansion, with the most notable increases in sales, production and earnings. Capital expenditures are expected to continue at the 1959 level, or increase slightly.

THE STEWART REPORT

— *a critical appraisal*

The recent Report of the Royal Commision on Price Spreads of Food Products contained many controversial suggestions. In the following article, the author takes a critical look at the Commission's conclusions and recommendations.

DAVID S. R. LEIGHTON

In what must surely rank as one of the most controversial Royal Commission reports ever published, the Stewart Commission on Food Price Spreads has made public its findings and recommendations. The result is an odd collection of antiquated economic analysis, misleading statistics and paternalistic philosophy. The main saving grace of the report is that in general it does not recommend legislation, but stresses instead the need for a better-informed public.

This commission took some two years to prepare its report, and the cost of the proceedings to the Canadian taxpayer will probably never be known. The commission was appointed in 1957 in what was pretty clearly a political move to take the heat off the government at election time. It has served that purpose admirably, but it is devoutly to be hoped that no one now takes its conclusions and recommendations too seriously from any other standpoint. Indeed, the nature of the work of this and other recent Royal Commissions raises a more fundamental question as to whether these elaborately-staged proceedings are really worth all the time, cost and effort, entertaining as they may be.

By now, the reader may have gathered that this paper is intended as a critique of the Stewart Commission Report. This is indeed what it is meant to be. It is my intention in analyzing the report to follow the following general pattern — first, the findings of the report itself will be summarized; these then will be considered with a critical eye; finally, some of the fundamental issues that the report raises will be discussed and analyzed.

CHIEF RECOMMENDATIONS OF THE COMMISSION

The findings and recommendations of the Commission cover so much ground that they are difficult to summarize. In making such a summary, therefore, it is the author's sincere hope that he has not done any injustice to the meaning or intent of the Commission.

The Commission reports that farm prices did not rise in the period 1949-58, and retail food prices rose by some 20%. In general, the Commission said that there was no single cause for the widening gap between prices paid farmers and those paid by consumers.

The Commission pointed to a number of factors: rising incomes; more expensive tastes; increases in the productivity of agriculture; rapid growth of cities and metropolitan areas and the consequent growth of food distribution and retailing facilities. But it singled out the food chains and breakfast food manufacturers for particular attention as they have allegedly: (a) taken out exceptionally large profits, and (b) spent unduly large amounts on advertising and promotion of a "service" rather than of a "price" nature. "We are satisfied that this condition is one of the causes of the increase in price spreads," says the report.

These firms were able to make high profits and compete on a non-price basis because, under conditions of rising consumer incomes and demand, they found little consumer resistance to rising prices. The Commission is critical of the promotional expenditures because "over the past 10 years the volume of

food materials consumed in Canada has not increased by any more than the increase in population . . . . what then is accomplished by the considerable amount of effort expended in food promotion?"

The Commission states that the rise in consumer food prices must be halted, and to this end recommends greater public information about the food industries. Specifically, it recommends:

- Requiring private companies to make annual reports on operations.
- Establishment of a permanent council on prices, productivity and incomes which would keep the whole area of the food industries under review and which would report to the cabinet.
- Giving the Combines Investigation Commission authority to investigate the buying and selling practices of the big firms in the food industry. It believes that such investigations of particular situations might lead to the conclusion that "action to impose some limit on total promotional expenditures (or revenues), or the complete elimination of certain forms of promotion, would be best calculated to move firms in the direction of price reductions". The Commission also added two further suggestions on this score:

"First, as an alternative to any possible limitation on promotional expenditures, retail firms might elect to pay patronage dividends.

"Second, that the Government define for the industry a fair and reasonable return on investment, and that profits above this level be subject to a higher rate of taxation." This course was proposed where prices continued to be associated with a high level of return on investment and no action seemed to be possible to effect a reduction in prices.

- Legislation to allow the incorporation of producer cooperatives, so as to permit primary producers "to band themselves together with legislative sanctions in order to establish, on the selling side of the market, conditions similar to those found in the food marketing system."
- Requiring retailers who give trading stamps to offer consumers the alternative of a cash discount on purchases.
- Continuation of efforts by government in cooperation with the trade towards more informative labelling, standardization of container sizes, and simplification of grading.
- Drawing up by the Association of Canadian Advertisers and the food industry of a code of ethics designed to curb misleading advertising.
- Establishment of an office in the Justice Department to which consumers could make complaints and which would gather and publish information on consumer protective legislation and on services available to aid consumers.
- More effective statistical reporting on the food industry.

While signing the main report, Mrs. Dorothy Walton, past president of the Canadian Association of Consumers, added a memorandum of reservations. She stated that there had been too much emphasis on the costs of advertising, transportation, cold storage and packing materials, which together make up only 27% of the total marketing bill. The report also paid too much attention to the wholesale-retail part of the food industry, though other parts were responsible for more than three-quarters of the increase in the price spread, Mrs. Walton said. There should have been more study of the processing industries.

THE COMMISSION'S ANALYSIS

The Commission's general conclusion that the rising price spreads have been due to a combination of factors certainly appears sound — one could hardly have expected any different conclusion. Moreover, there is little question that the factors listed by the commission have all played a part. The question comes in the emphasis that has been placed on high profits and high expenses as causative factors. Certainly, these may have had some influence, but the Commission's own figures indicate that the influence was relatively minor. As Mrs. Walton points out in her memorandum, they scarcely justify the attention which the report gives to these aspects of the industry.

But the Commission's general analysis may also be questioned on technical grounds. The analysis and recommendations are built on the statistical evidence presented by the Commission that profits and promotional expenditures in some parts of the industry — notably the food chains and breakfast-cereal manufacturers—are too high. There is good reason to suspect that the figures presented by the Commission, particularly regarding profits, are fallacious and misleading. And if this can be proved, surely the whole subsequent analysis singling out the chains and cereal manufacturers comes tumbling down like a house of cards. In a later section of this paper, the fallacies underlying the Commission's statistics will be reviewed in detail.

It is also worthy of note that the rise in retail food prices has not increased faster or to any greater extent than retail prices generally; in fact, the retail

prices of food have increased *less* than the general rise of prices in the economy as a whole. There is reason here to question whether the consumer interest is really at stake in an investigation such as this. Certainly, to indict the food chains because "they found little consumer resistance to rising prices" seems to put the blame, if any, on the wrong party; consumers had growing incomes and were willing to pay more, and one can hardly blame the chains for passing on inflated costs of doing business under these conditions, if indeed that is what they did. What would the Commission expect them to do — take losses?

The Commission is even more naive when it says that food consumption did not increase faster than population growth despite advertising and promotion, and therefore asks: "What is accomplished by the effort expended on promotion?"

Did it really expect people to eat and drink more because of all this advertising? Of course the advertising is competitive, and much of it is wasteful when viewed from the standpoint of classical economics. But people are not "economic men". Advertising, which is a result here of competition, has a definite place to play in our economy, and that place is determined by the consumer in his buying decisions. This is a subject in itself, of course, but let us not forget that competition does bestow some benefits as well as some costs.

THE COMMISSION'S SPECIFIC RECOMMENDATIONS

Some of the Commission's specific recommendations for action will be discussed in turn below.

1. *Requiring Private Companies to make annual reports.*

From many standpoints, this would be desirable. But at the same time, such a requirement would lead to what in the view of many would be an unwarranted invasion of privacy. There is an important principle involved here which demands careful consideration before any action is taken.

2. *Establishment of a council on prices, productivity and incomes in the food industry.*

Perhaps, in a planned economy or under wartime conditions, we need such a watchdog council over all prices. But we are not yet committed to a planned economy, and we are not at war. And if we are to have such watchdog councils, it seems highly unfair to single out the food industry—we should go whole-hog or not at all. Under present conditions, it must surely be not at all. Moreover, what if anything should or could this council do if it found unsatisfactory conditions?

3. *Investigation of buying and selling practices of the large firms in the industry.*

No one can quarrel with the general recommendation, but the Commission is on thin ice when it suggests that such investigations may well lead to imposing limits on total promotional expenditures and the elimination of certain forms of promotion. How would anyone determine how much promotion is too much? Are some promotional devices "sounder" or "better" than others? Is advertising better for the economy or the consumer than premiums or better packages? Can the Commission decide this better than the consumer, whose money it is?

The other suggestions of the Commission — possible patronage dividends to consumers in lieu of advertising or promotion, and a special "excess profits" rate of taxation—can only be described as astounding, particularly the latter. If it is the Commission's wish to make the food industry into a public utility, then it should say so. Certainly this is the implication of the "excess profits" suggestion.

What is particularly frightening in this regard is the naive approach taken throughout the report to the calculation of profits, and whether they are high or low. To the student of business, the fallacies of using "invested capital" as a yardstick for measuring profits are well known. It is sufficient to say, perhaps, that the fact that this measure is not widely used by prospective investors is indicative of the fact that would-be buyers certainly don't regard historical cost as adequate in calculating current profitability. To quote Mr. Paul F. Deacon in *The Financial Post,*[1] "in seeking a measure of reasonable profits, the commissioners, in essence, thrust aside the commonly used measure of profit on sales and go whole hog in favor of return on capital invested.

"If there is one lesson that most investors have learned over the years, there is no one measure that will tell you whether a profit rate is good or bad.

"The investor looking for a profitable investment will most certainly examine the earnings a company makes from the capital invested in the business. He will also investigate many other factors, financial and otherwise, including profit on sales.

"What he looks for, in the main, however, is not so much a big percent figure, but a trend.

"Are total profits growing? Are per share profits rising? Is the return on sales and the return on capital invested moving up or down?

"One company may have a higher return on capital than another and still be a less attractive buy

[1]Dec. 5, 1959, p. 4.

because of other factors—a high proportion of debt, big cyclical swings in business and earnings, an unrealistically low book value for its assets that produces an unrealistically high figure for return on capital.

"The food chains, which the Commission reports are earning 17% on net worth (a profit rate which it suggests is too high), have been able to develop strongly because they offered a service people wanted at prices lower than individual shops could afford to offer.

"They get this high return because they stretch their capital to the limit. They invest a minimum in fixed assets, dispose of their stores and rent them back on long-term leases. But these long-term leases represent a large forward commitment in relation to their capital, and make the return look much less high."

4. *More informative labelling, standardization of sizes, and simplification of grading.*

This is by no means as simple a matter as it sounds. Who could argue against more informative labelling, for example? But when it is carried to ridiculous extremes, as in some of the recently-proposed packaging regulations dictating sizes of type face to be used on labels, some question may be raised. Simplification of grading is highly desirable, but rather difficult, due to problems of definition and specification, and due to the impossibility of measuring and grading such intangible factors as taste and flavor. In a sense, brand advertising performs some of the functions of grade labelling.

5. *Curbing misleading advertising.*

To oppose misleading advertising is a bit like opposing sin. The problem arises when one attempts to state what is or is not misleading. Machinery does already exist to prevent "misleading" food and drug advertising, as the Commission does recognize. But the problems of operating such a regulatory body are many, and it is extremely difficult to be fair to all concerned. It is by no means clear that the answer is simply more regulation or "codes of ethics", no matter how well-intentioned.

6. *Establishment of a consumer office in the Justice Department.*

In addition to adding to the already back-breaking burden to the taxpayer of governmental agencies, departments, councils and other bodies, this raises the question: What useful purpose would such a body serve, and at what cost? We already have such organizations as the Better Business Bureaus, Chambers of Commerce and the like, where complaints may be lodged and investigated. There are organizations such as the Canadian Association of Consumers to which one may belong (and incidentally, the C.A.C. is *not* representative of all Canadian consumers, as is sometimes implied). And there are private services like *Consumers Research*, which are designed to improve consumer knowledge. Certainly we don't want more government bodies just for the sake of having them.

THE PHILOSOPHY OF THE REPORT

While there are specific cases of inaccuracy or fallacy in the Stewart report, perhaps the most disturbing feature is the paternalistic point of view that underlies the entire report. The presumption seems to be that the consumer is somehow not to be trusted to spend his or her own money—he or she must be protected against advertising, promotion and too many services by government action.

The commissioners would undoubtedly claim the opposite—that they are showing their faith in the consumer by not recommending legislation, but rather better consumer education. This may be true, but at every turn they contradict themselves with such suggestions as limiting promotional activity, excess profits taxes, governmental watchdogs, and the like. The implication is present that if the consumer were better educated as to what constitutes rational (economic) behaviour, she would somehow act differently than she has in the past. There is little question that the commissioners feel that the consumer has been making essentially uninformed decisions. But the consumer may not always spend her money as the economists would have her spend it—by weighing carefully prices, utilities and indifference curves and arriving at an optimum choice. Many of us treasure free choice and the right to be wasteful if we wish. In any case, we cannot ignore the psychological satisfactions that accrue from such non-economic factors as prestige, pleasing appearance, or even "forced" saving (a form of self-delusion). Does anyone seriously believe that consumers are, or should be, economic automatons?

The belief that we know what is best for our fellow-man is contrary to our western tradition of thought. True humility and tolerance would indicate the desirability and necessity of free individual choice. To have the Commission imply that consumers don't really want gimmicks, trading stamps, advertising, parking lots and store services is presumptuous in the extreme—consumers have proved their wants by buying these things and patronizing these stores. The choice has been theirs, and it is not for us to judge whether the choice was sensible or logical. It was sensible to that consumer at that

time and it doesn't matter what decision the commissioners think she should have made in light of their classical economic theory. What do we mean by "rational" anyway?

The commissioners seem quite oblivious to the fundamental that unless one accepts the principles of free consumer choice and competition one is heading towards a planned society. If this is what the Commission wants, so be it. But their failure even to recognize that such an issue is involved must be deeply disturbing to thinking Canadians.

SUMMARY AND CONCLUSIONS

In the author's judgment, the Stewart Commission Report has serious flaws which render it largely impotent. Economically, many of its ideas appear based on the hoary concept of the "economic man", an idea that Freud effectively disposed of some time ago. Logically, the report falls down at many places, and many of its statistical foundations are just plain fallacious. Philosophically, the paternalistic outlook that underlies the entire report rests on an apparent lack of understanding and appreciation of the fundamental strengths of our way of life.

From the standpoint of action, we can do no better than quote the Toronto *Globe and Mail*:

> "In the circumstances, it (the Commission) can hardly justify either to the Government or to the public its bureaucratic recommendations for supervision."

ADVERTISING AND CONSUMER RESEARCH

That there has been such a swift advance in consumer research during the past two years argues one or two things. Either the development has been prompted by growing dissatisfaction with consumer products in general; or it has derived from the greater multiplicity of similar products. The second explanation is surely the right one. The problem of the shopper who knows what to buy is immediately which to buy. We cannot all have expert knowledge of the technical properties to be sought in a satisfactory motor-car, a bar of soap or a mattress.

Consumer research is undertaken to provide consumer protection against manufacturers, yet less against the manufacturers as such than in their capacity as advertisers of what they produce. Advertisements, it is alleged, are so often, and so cleverly, misleading that the potential customer is easily persuaded to buy an article that is by no means all he thinks it to be.

This is no new reproof to advertisers. There are people who believe advertising, of its nature, to be thoroughly bad; there are even those who will not concede it the status of a necessary evil. They claim that heavy advertising has demoralizing effects because it encourages greater spending than individuals and families can afford; that because some advertisements contain half-truths and mis-statements all are worthless and undesirable.

These are sweeping charges to which there are substantial answers. The economics of advertising certainly proves that the extra cost imposed on the consumer, whatever the product involved, is trivial. The fact that some people buy what they cannot afford must not be blamed solely on advertising. How we react to such pressures is our own responsibility.

In so far as advertisements do not tell the whole truth, or are blatantly misleading, the firms that sponsor and produce them are to be condemned. But even in this matter it must be remembered that there are a number of codes and practices created and subscribed to by a variety of trade and professional organizations which do give a measure of protection to the consumer.

—*The Manager,*
The Journal of the British Institute of Management

Operations Research and Management

Many articles and papers have been written on the more technical uses and applications of Operations Research; few have attempted to probe the impact of this new tool on management. In the following article, an O.R. practitioner outlines the management problems created by the use of Operations Research.

B. A. Wilson

The use of sophisticated mathematical techniques in modern scientific management has been the subject of a multitude of articles and papers in the last few years. Rather unfortunately, there has been a tendency to overlook or at least gloss over the effects on the role of the manager when Operations Research, advanced statistical, or "scientific management" techniques are introduced into an organization.

Sometimes, it is almost made to seem that management need only hire a tame mathematician or two, buy a computer, and it is well launched into the scientific management age. That this is not so must cross the mind of every thinking manager (unless he has allowed himself to be so cowed by the apparent complexity of the techniques employed that he no longer trusts his ability to think). At the same time, a thinking manager cannot cast aside these techniques as theoretical poppycock, for the background of solid business results is growing steadily.

No one can lay down a rule book which will say when the operations research approach is useful to a company and when it is not. However, it is possible to outline some of the problems of employing the technique which are not a function of the mathematics or logic involved, but really represent the problems of management in making the technique useful and practical.

QUESTIONS AND PROBLEMS

The following are some of the questions and problems that management must face in introducing sophisticated planning and analytic techniques.

1. What can I expect from these new techniques?
2. What can the practitioners of the techniques expect of me?
3. What will the effects be on my job and my organization?
4. How can I keep control of such an activity if I am not myself a specialist in the field?

Before considering any of these questions in detail, it is probably best to attempt to define what Operations Research really is and does. Because it is so often intimately associated with rather esoteric terms like "Linear Programming", "System Simulation", "Monte Carlo Method", "Game Theory", "Dynamic Programming", etc., the impression is easily gained that these specific mathematical techniques *are* Operations Research. To restore perspective, let us remember that, just as Operations Research is a technique of use in management, but is not management itself, so the various mathematical methods are techniques of use in O.R., but not O.R. itself.

The following definition of O.R. may well curl the hair of many a purist, but is believed to be quite adequate from the standpoint of business problems, even if not as elegant as some in existence. Operations Research is the analysis of a business or system

for the purpose of determining whether a mathematical representation (model) of the system can be made, and the use of further analytic techniques to determine how the business or system should react to future conditions to give the greatest advantage (which may be maximum profit, minimum cost, maximum return on investment, shortest delivery cycle, minimum inventory level, etc.).

At this point, this definition may seem pretty ambiguous, but rather than attempting further definition or clarification, let us consider each of the four problems outlined above, and see if in answering them, the fundamental nature of O.R. can be described, and some idea of its relationship to a business organization established.

1. *What can I expect from these new techniques?*

This is the aspect of O.R. which has been best publicized. Instead of attempting to recapitulate specific results or dollar savings, which have resulted from the use of the new techniques, it is more fruitful to outline several general areas of planning where the impact is likely to be felt. First of all, it can be expected that time-honoured principles will be challenged and "penalty costs" for adhering to these principles will be stated. The principle of holding inventories to a minimum at all times or at certain stated periods of the year may make good sense from a consideration of invested capital, but is it costing more than it is worth in overtime premiums, freight penalties for rush shipments, and in premium prices for raw materials bought on short notice? Because an O.R. analysis balances these factors against each other, it may well show that the best inventory policy is not the policy that appeals to any one of Procurement, Manufacturing, Marketing, or Treasury individually, but is best for the company as a whole.

Secondly, the answers which come out, even if they seem to be at variance with previous thinking, can be explained in highly logical fashion. It is not good enough for the analyst who has been working on a problem to present to a manager a new plan for operating a department, a recommendation on the location of a new plant, or a suggestion to make rather than buy, with the mere statement that "analysis shows this to be best". Either the results can be given physical meaning and/or a logical explanation, or the chances are that the results should be disregarded. The mathematics must correspond to physical reality—a trite comment, but one which bears emphasizing because the impression can easily be gathered by the manager who is not a mathematician himself that the results of O.R. *must* be difficult to understand. There may well be times when this is true, but it has certainly been the author's experience that a good physical reason for most recommendations can be found; in fact, personal experience indicates that, if the final result defies logical interpretation, something has gone wrong with the mathematical analysis.

Because the use of O.R. techniques so often involves the use of computers, it is often possible to broaden the range of alternatives to be examined; for this reason fewer prior decisions must be made by managers and technical personnel on how to limit the range of alternatives so that a usable plan of action may be derived in a sufficiently short period of time. An example of the kind of period decision which need not be made may illustrate this.

In planning refinery runs in the petroleum industry, the management and technical staff may decide, from past experience and indicated future product requirements, that a certain type of crude oil is appropriate. Using conventional techniques, it is a virtual necessity that this decision be made in advance of planning, or at least that a decision be made to evaluate two or three specific alternative crude oils. If a proper selection of crude oil has been made, and other prior decisions have been correctly made, one of the plans prepared may represent the best way of operating that particular refinery. However, using O.R. techniques, a plan can be derived which will definitely be the most economic way of operating the refinery without restricting the choice of crude oil, except by price and availability, and without making many of the other prior decisions formerly necessary. In addition, plans for changed product requirements, changed crude oil prices, etc., can be rapidly prepared without introducing the artificial restrictions introduced by prior decision.

Other examples of what the O.R. approach can do in business and what can be expected from it could be quoted. However, it is probably best to summarize this brief discussion by stating that the intelligent use of the new techniques involved can give more accurate, more rapid, and often unexpected answers to business problems which are capable of being resolved by logical as opposed to intuitive means.

On the other hand, two points should be kept in mind with regard to what cannot be expected from the new techniques. In the first place, there is no magic way to turn a sow's ear into a silk purse. The lack of basic data concerning a company's operation, or the existence of unreliable data, will render any attempt at mathematical analysis impossible in the worst case, or of very dubious validity in the best case. While statistical techniques can be used to evaluate the validity of data, there is still no method of creating valid data except by painstaking observa-

tion, carefully-controlled test runs, and designed experiments. The attempt to use existing records and data in O.R. studies may eventually indicate the inadequacy or inconsistency of existing data, but any results derived from using such data can be no better than the basic data. As one consultant puts it, "Garbage in, Garbage out".

Again, O.R. techniques may be used to establish such things as the best production volume to target for at various selling prices, but it cannot by any stretch of the imagination guarantee that the sales force can, in fact, sell that volume at the stated price. Put more generally, O.R. studies cannot give valid guidance in situations where a cause and effect relationship cannot be either stated directly from knowledge of physical conditions or implied from good statistical analysis. It can be used to give a manager optional plans, each plan being best suited to a stated set of pre-supposed conditions of sales price, material cost, equipment cost, expected market, etc. Nonetheless, it still is a matter of managerial decision to name the course of action to be followed, bearing in mind the marginal advantage of any given option in context with the likelihood of the assumed conditions being fulfilled. O.R. can remove the bull-work, but in doing so it merely clears a manager's mind of detail so that he may be free to concentrate on the truly managerial problems.

2. *What can the practitioners of the techniques expect of me?*

This is not a question to which a pat answer can be given, as the relationship of the manager to an O.R. group must be conditioned by the size of the project, its complexity, and the way the group is fitted into the existing organization.

In examining the responsibilities of a manager to an O.R. group, one must recognize that the professional mathematician or physicist who gets involved in O.R. is not likely to be a thoroughly experienced business man. For this reason, while he can offer services to management that cannot be obtained from other sources, and can be a valuable source of new ideas, he will probably require more careful guidance in other respects. He is not likely to be as concerned with operating through "proper channels" as may be required in a large, highly-organized company. He is less likely to be concerned with the effects of his work on company organization, departmental responsibilities or the status of individuals affected by his work. His job is to find the logical, most efficient way of solving the problem presented to him. He is not hired to worry about the fact that Mr. X's status is lowered because a logical, mathematical method has been found to do the work which previously required an "experienced" man like X. He is not concerned about resentments stirred up if his results indicate that Department Y, noted for and proud of its record of efficiency, has obtained its record by forcing inefficient conditions on the departments feeding it. It is merely a fact demonstrable by logical analysis.

This is the basic nature of the O.R. approach. If these organizational and human problems are made the concern of the analyst, he will lose his objectivity, and hence his fundamental reason for existence. O.R. people may develop into good managers, but the minute they get involved in management, they cease being true O.R. workers.

Accordingly, the manager for whom O.R. people are working must be prepared to play an active role in the work—not in analyzing the problems himself, but in creating and maintaining an atmosphere conducive to cold, analytic thinking, in formulating the problems to be attacked, and in ensuring that adequate data for the fulfillment of the analysis are made readily available.

The first area mentioned — creating and maintaining an atmosphere conducive to cold, analytic thinking—may sound rather ivory-towered, and indeed, if an O.R. group in industry is put to work too far from the hurly-burly of everyday problems, one is likely to get back Cloud 9 recommendations which are impossible to implement. However, it is a rightful expectation of an O.R. group, at least during the period of developing techniques for use in company planning, to be protected from undue pressures by the manager responsible for their work. These pressures are, on the one hand, to introduce new techniques before they are fully developed and proven out, and, on the other hand, to restrict the activities of the group to narrow insignificant fields of action where the latent power of the techniques will be wasted.

The second area of responsibility—formulating the problems to be attacked—cannot be avoided by management and turned over to the analysis group. It is not enough for a manager, having a general feeling that his operation "could be run more efficiently", or that "new methods of planning and controlling our operations are necessary", to turn an O.R. group loose with the general admonition to "study the operation and find out what we can do". Again, this is a trite comment, but one which must be made to emphasize the fact that a manager who puts an O.R. group to work must manage and direct the activities of such a group with just as much care as the other groups reporting to him. Two common results of the failure to give adequate, ex-

plicit direction are the failure to produce down-to-earth practical results, and creation of antagonism between the staff O.R. group on one hand, and operating people on the other hand.

Like most other new methods, it is usually better to start out in a small way, working on a detailed problem, and let the knowledge gathered through applying new techniques in this area serve as a basis for expanding the area of activity. While the O.R. man with his basic idea of "optimizing the overall activities of the whole company" may feel initial frustration at being confined to a specific area, he will, if he is practical in his approach, appreciate the necessity of this.

The problem of inadequate, unreliable, or inconsistent data is a third area where analysis must look to management for help. Without adequate, reliable, self-consistent data, analysis cannot proceed. Some organizations may be blessed with adequate records of relevant data, accurately maintained, but it is much more likely that the existing data will not be adequate. This is by no means necessarily a reflection on control techniques and recording systems currently in use. It may be merely a matter that data gathered and records kept for certain accounting or production control purposes may very well not be the data and records required by an O.R. team. On the other hand, logical analysis of data may very well establish the fact that the figures used so carefully for accounting and control purposes are really quite inconsistent, or downright wrong.

Under such circumstances, management must be prepared to set up procedures which will generate the necessary data. This can be expected to be troublesome for at least two reasons. First of all, an analyst is not likely to know exactly what information he requires (and in what form) until he has proceeded quite well along with his analysis. Accordingly, his requests for data made to operating people may often appear capricious and ill-considered.

Secondly, his requests for data may appear to be burdensome and snoopy to operating personnel who are not too familiar with the project.

Accordingly, the support of management in explaining the need for data and in setting up the necessary mechanisms is a very legitimate expectation of the O.R. worker.

Since operating management can be seen to be the important link between the staff O.R. group and the line operating people, a fourth legitimate requirement of management is thrown up—the necessity of understanding what the specific technique being applied is and does.

Of course, it is unreasonable to expect a busy operating manager to be familiar with the mathematical technique of Linear Programming or Queuing Theory, but it is not unreasonable to expect him to make himself generally knowledgeable about the principles of the technique being used, its capabilities, and its limitations.

3. *What will the effects be on my job and my organization?*

As is always the case in a general discussion of this type, no flat prediction can be made for a specific case, but certain likely results can be outlined.

First of all, the introduction of O.R. techniques is likely to serve as a force causing centralization rather than decentralization—or at least it will tend to make the size of decentralized units greater while reducing the number of them. This results from two causes—the likely use of a computer and the need for a highly-trained special group of personnel. Let us look at each of these points.

The introduction of O.R. techniques does not absolutely require the introduction of electronic computation, but, because the resolution of the complex "system studies" which can be undertaken with the new techniques is prohibitively slow (in most cases) if done by manual means, it is likely that electronic computation will be called into service. If an organization is highly decentralized, it is unlikely that the small organization segments can support the services of a computer. Even if computer time were to be rented from an outside source on behalf of each organizational segment, there would be the need for an inordinate amount of programming if each group were to approach its problems in its own way with is own group of specialists.

Accordingly, the introduction of computer techniques, regardless of whether the computer is run by company personnel or by an outside organization, tends to cause the establishment of a centralized group of specialists. The establishment of such a centralized group of specialists is in itself a strong step away from complete decentralization.

Even if the actual O.R. group does not include its own computer specialist or specialists, the specialized personnel required for O.R. analysis cannot be supported by each section of a highly-decentralized company on its own. Even if a centralized group could be put to work for each one of the decentralized sections as required, it is inevitable that there will be strong pressure to apply methods and techniques developed and successfully used in one section to the operations of other sections. This certainly cuts down on the autonomy of the manager of a decentralized section.

Because the basic job of O.R. in business is the putting together of an overall company plan to serve as the logical basis upon which business decisions can be made, there are bound to be many cases of injured status, personal resentment and antagonistic reaction if the techniques are successfully applied. This should be recognized quite clearly when such work is undertaken.

Consider the case of a very experienced man who carries around in his head great quantities of technical details about what can and cannot be done by the equipment in a certain department. Because of his great knowledge and experience he has become indispensable in the organization—no records exist to equal his knowledge, no one can question his judgment and, when it comes to planning changes or expansions, his opinion carries great weight. However, is such a man really anything more than a source of data? Cannot most of his knowledge and experience be summarized and put down in logical form? Is it not highly possible that he has overlooked some one or many combinations of the bits of knowledge he has acquired in assessing a problem given to him? If the answer to any one or more of these three questions yes, then there is every likelihood that careful analysis of the operations of the department or departments on which he is the expert will establish the facts (and the basis of the facts) which will make it unnecessary to rely on the memory and experience of one man. If such facts can be established by logical means, it is the task of O.R. to establish them. Accordingly, it must be accepted that the efforts of analysts are highly likely to cause organizational disturbances wherever "experts" exist.

On the other hand, there need be no antagonism if the expert has established the basis of his facts, and is prepared to make his knowledge available as facts rather than conclusions derived from the facts. This is a beautiful objective, but a man would be something more than the ordinary human if he were fully prepared to pass his knowledge along in the form of basic facts to be used in arriving at general conclusions rather than offering his considered opinion arrived at after weighing his factual knowledge against the requirements of a problem submitted to him.

Accordingly, it seems inevitable that there will be relationship problems that a manager must face during the period before technical specialist and O.R. analyst learn to respect each other's area of responsibility and capabilities.

Looking to the effect on his own job, a manager can see, from what has already been said, some of the changed or new responsibilities which will fall on his shoulders. Lest it seem that O.R. will mean only additional chores and cause relationship problems for a manager, let it be noted that there should be much less detail work for him to perform and hence much more time for the non-analytic, truly managerial responsibilities. If the logical basis for many of the functions and operations under his control has been established, there need be fewer calls on his time to resolve differences or problems which previously arose from the apparent incompatibility of "facts" as viewed by two different sections of his organization.

As mentioned earlier, the use of O.R. techniques should permit the examination of more alternate courses of action for a company. This leaves the manager with a greater problem of deciding which of the alternatives presented to him is most attractive when consideration is given to the non-tangibles as well as the analytic aspects. But it does free him from the necessity of spending a great deal of time deciding how to restrict the facts and options to be considered in planning so that plans can be made in a sufficiently short time by the available staff. This he must surely do if older conventional planning techniques are used.

4. *How can I keep control of such an activity if I am not myself a specialist in the field?*

This problem can be regarded in the same light as the problem of a general manager who has come up through the marketing department and feels that he really doesn't understand what the engineering department is doing. The exercise of adequate control certainly is more difficult for a manager who is not acquainted with the specific problems encountered and techniques employed in any one of the departments reporting to him. However, just as a good manager whose background is marketing can control and guide engineering and manufacturing operations, so can a good manager who lacks detailed technical knowledge of O.R. lead and control an O.R. group.

First and foremost, he must recognize one of the points made earlier in discussing what can be expected from O.R.—either the results can be given physical meaning and/or a logical explanation, or the chances are the results should be disregarded. Accordingly, he need not feel that he must accept anything merely because someone using mathematical techniques has issued it.

Secondly, he must be prepared to set aside enough time to learn a few general principles connected with the techniques the group working for him is likely to use. He certainly need not know how to invert a matrix, apply any of the algorithms used in the solution of linear programming problems, or perform multiple regression analysis, but he should make a real effort to learn what can or cannot be done by the techniques his group is using.

Thirdly, regular reports in good clear English rather than technical jargon must be demanded from the group. There are, of course, exceptions, but it is a pretty fair rule of thumb that the man who can't say it in clear English doesn't really understand the significance of his mathematics.

Finally, unless it is intended that the O.R. group really be a "far-out" development group, work schedules should be drawn up just as for any other group or department. Of course, the schedules cannot be as precise as production schedules, but deviations from a rough schedule of work should require explanation just as deviations from a production schedule. This suggestion will raise the cry of "Impossible" from many O.R. workers. However, it should be realized that fundamental research into new techniques and approaches is not likely to be the concern of groups working in industry. If industry expects to benefit from further advances in mathematical techniques, it assuredly must be prepared to support basic research in the field of O.R. Nevertheless, it is beyond the means of most companies (in Canada, at least) to have groups of their own working on anything but the application of already-developed techniques to their specific problems. Application work of this kind must certainly show a reasonable rate of progress if it is to justify itself, and how is the non-specialist to measure progress except by comparison with a schedule?

CONCLUSION

In attempting to sum up the impact of O.R. on the work of managers, three basic and rather homely facts stand out.

1. O.R. is merely another tool for the modern manager to use in controlling his ever more complex operations.

2. Successful application of the new mathematical techniques, together with an infusion of some good old-fashioned logical analysis, can free managers from much hum-drum and routine work, clearing their desks and minds for concentration on the problems which are really deserving of their full attention.

3. The principles involved in managing an O.R. group are not basically different from the principles involved in managing any specialized segment of a business enterprise.

The use of mathematical terminology and high-speed computers may hide these rather simple facts, but it is inescapable that any technique which relies entirely on logics and mathematics itself can be managed in a logical fashion.

DEPRECIATION OF MONEY

	Indexes of Value of Money†			Annual Rate of Depreciation (Compounded)		
	1948	1953	1958	'48-'53	'53-'58	'48-'58
Portugal	100	99	94	0.2%	1.0%	0.6%
Switzerland	100	96	90	0.8	1.3	1.1
Belgium	100	94	87	1.2	1.5	1.3
Ecuador	100	89	86	2.2	0.8	1.5
Germany	100	93	84	1.5	1.9	1.7
India	100	92	84	1.7	1.7	1.7
United States	100	90	83	2.1	1.5	1.8
Venezuela	100	85	83	3.1	0.6	1.8
Pakistan	100	89	81	2.2	1.9	2.1
Canada	100	84	78	3.4	1.5	2.5
Italy	100	85	76	3.1	2.4	2.8
Denmark	100	81	69	4.1	3.1	3.6
South Africa	100	77	67	5.1	2.6	3.9
The Netherlands	100	78	66	5.0	3.1	4.0
Sweden	100	77	65	5.1	3.4	4.3
United Kingdom	100	77	65	5.1	3.4	4.3
Norway	100	74	63	5.8	3.1	4.5
New Zealand	100	75	63	5.7	3.4	4.6
Japan	100	63	57	9.0	1.7	5.4
Spain	100	79	56	4.7	6.5	5.6
Turkey	100	88	51	2.4	10.3	6.4
Finland	100	64	50	8.6	4.7	6.7
France	100	60	49	9.7	3.8	6.8
Australia	100	56	49	10.8	2.8	6.9
Greece	100	63	48	8.9	5.3	7.1
Mexico	100	71	47	6.6	7.8	7.2
Colombia	100	68	45	7.4	7.9	7.7
Peru	100	60	44	9.7	5.8	7.8
Austria	100	49	43	13.2	2.6	8.1
Uruguay	100	71	41	6.6	10.6	8.6
Brazil	100	62	26	9.2	15.9	12.6
Argentina	100	31	14	20.9	14.4	17.7
Chile	100	39	5	17.1	33.2	25.6
Paraguay	100	8	4	39.0	14.7	27.9
Bolivia	100	23	1	25.6	47.5	37.6

Note: Depreciation computed from unrounded data. †Measured by rise in official cost of living or consumer price index.

—National City Bank of New York Monthly Letter

New Light on
TRANSPORTATION COSTS

A recent study by a group of Harvard economists has thrown some new light on the age-old problems of our transportation industries. Their findings have particular pertinence to current freight rates inquiries.

D. R. LADD

During recent months, the Canadian transportation "kettle" has come to a boil and once more we have a Royal Commission investigating freight rates and related matters. There can be no doubt that Canadian railways are in deep financial trouble. There may be some doubt that ever-increasing freight rates are hurting the Prairie provinces and the Maritime provinces to the extent that some of their professional prophets of economic strangulation claim; but surely these areas are not helped by high transportation costs. These are the horns of one of Canada's traditional political and economic dilemmas. To help the Prairies and the Maritimes by reducing or stabilizing freight rates must surely work harm on the railways. To help the railways' financial position by allowing them to increase rates will, in some measure, add to the economic woes of East and West. We have a new inquiry into possible ways of resolving this old, old dilemma. One is entitled to inquire as to the likelihood of a more satisfactory resolution being arrived at this time.

If a very important reassessment and restatement of the fundamental competitive relationships among the various transportation agencies can assist in resolving this dilemma, we may look forward to something more than old wine in new bottles. If the members of the McPherson Commission, the various regulatory agencies, and transportation management really study the recent publication, *Competition In The Transportation Industries*,[1] and include in their attack on the problem some of the book's analyses and recommendations, it seems certain that a more rational and satisfactory transportation system would result.

[1]By John R. Meyer, Merton J. Peck, John Stenason, and Charles Zwick (Harvard University Press, Cambridge, Mass., 1959).

LACK OF COST DATA

A principal difficulty in the paths of management, regulators, and public policy makers attempting analyses of transportation problems has always been the lack of adequate knowledge about the behaviour of transportation costs. Observation suggests that there are many joint costs—back-haul, for example—in transportion operations; that many costs—right-of-way, for example—are common to many individual services; that an unusually large portion of costs are not responsive to changes in volume of business over very wide ranges. Conventional accounting techniques are generally most inadequate for analyzing costs in such situations, yet they have been the basis for most cost studies in the past. Fragmentary data have resulted from a few engineering experiments, but they have been insufficient to provide a basis for the necessary broad generalizations about cost behaviour. Statistical analysis has long been the most promising source of useful data, but statistical techniques have been used timorously and received most hesitantly by the industries involved. Consequently, there has long been great uncertainty about transportation costs, and most examinations of transportation problems have been inconclusive because they have been based on preconceptions about what costs should be rather than on knowledge of what they are.

The great contribution of Professor Meyer and his colleagues arises from their use of modern statistical techniques to study and describe transportation cost functions. Many of their techniques have been utilized before by one or two transportation companies in dealing with their own problems, but they are the first to have made a sweeping analysis of all transportation industries. Some aspects of their tech-

niques have been criticized by professional statisticians, and future researchers may well improve upon these techniques. More likely is the possibility that their results will be improved upon as long-overdue improvements in the collection and processing of basic financial data are carried out. However, after full allowance for possible error and for probable future improvement in results, there seems to be no question that for the first time we have a basically sound and sufficiently comprehensive statement of the costs of the several forms of transportation. Discussions of transportation policy can at last be conducted at the level of "What to do in light of the facts?" rather than at the old level of "What are the facts?"

The data in the Meyer study make abundantly clear the following relationships:

(1) Except for very short distances, the cost of providing rail transport is substantially less than the cost of over-the-highway transport.

(2) In many cases, the cost of providing piggyback service is less than that of ordinary rail box-car transportation.

(3) Water transportation is the cheapest of all forms of transportation for equivalent distances, even after making generous allowance for public subsidy through development of inland waterways.

(4) For commodities which can be put through a pipe, pipeline transportation, given sufficient volume, is cheaper than rail transport of these commodities.

(5) Air transport is, by a wide margin, the most costly to produce.

None of the foregoing generalizations consider *cost to the shipper*, in which case speed, dependability and the like would have to be considered. Speed is obviously the reason for the use of expensive air freight and conversely is the reason why many shippers cannot take advantage of low cost water shipments.

PRICING IMPLICATIONS

Having established these facts, it is understandable that the authors move on to a well-grounded attack on the "value-of-service" freight rate structure of the railways. This pricing system relates transportation charges to the value of the commodity being transported rather than to the cost of transporting the commodity. In less elegant terms, "value of service" pricing is charging what the traffic will bear, and leads to substantially higher costs for transporting a horse to a race track than for carrying him to the glue factory. Under this system, some commodities will be transported at rates several times greater than the marginal costs of transporting them, others at rates which barely equal the short-run marginal cost of the service, which may, indeed, be below long-run marginal cost.

Such a system works fairly well for the carrier as long as none of the rates are above the costs of a competitive service. And as long as society keeps the overall level of rates at a reasonable point, this system does a fair job of providing necessary transport for the economy at lowest possible cost. However, once a competitive form can provide the service profitably at a rate below the rail rate, as highway transports have done, the system begins to break down for both the carrier and the economy.

The railway must reduce rates toward its own costs or lose business to the competitor. For a variety of reasons, the railways failed to reduce rates and so lost business. Because they were unable to reduce high fixed costs as rapidly as volume shrank, profitability declined or disappeared. To meet this situation, the railways raised rates on these commodities which the trucks would not or could not carry—long distance shipments and bulk commodities among them. This process is never-ending, of course, because each increase in rail rates turns more traffic into potential business for the higher-cost trucks. As a result of this cycle, the economy in general is hampered because a part of the transportation job is not being done most efficiently, that is, by the lowest-cost form of transport available. Additional harm is done to those areas or commodities which, for one reason or another, must continue to use the railways at ever-increasing rates.

Obviously, the price of rail transportation, like the prices of most all goods and services, would have risen in the years since World War II as a result of inflation. However, for a variety of reasons—management inertia, rigidities of regulation, restrictive working rules and inability to raise capital among them — railways seems to have been less able than most industries to offset the effects of inflation by developing and employing cost-reducing innovations.[2] And equally important is that the railways, with huge fixed plants, have tried to battle inflation while facing a declining market brought on, in large measure, by their failure to take advantage of their low-cost operations vis-à-vis highway transports.

[2]The diesel electric locomotive, developed by an outsider, is an outstanding exception to this statement. Even here, restrictive working rules have prevented full realization of the potential savings made possible by these machines.

THE PASSENGER DEFICIT

The second extremely important conclusion to be drawn from the data developed by Professor Meyer and his associates is that most railway passenger services are monstrously unprofitable. The arguments over "passenger deficits" that have filled transportation writing over several decades are no longer very pertinent. The facts will simply not support any conclusion other than that railway passenger services generally lose vast sums of money. Even more important, the Meyer data indicate that, with a few exceptions, the railway is the most expensive way of moving people. From this one must conclude that most railway passenger services should be abandoned and that expenditure of scarce funds on attempts to develop more business, which because of its high costs will only increase losses, is a misuse of resources.

The question of passenger service cannot be separated from the freight rate question because these losses on passenger service operations are obviously being subsidized by freight revenues. Losses on passenger services are in essence fixed overhead which has to be covered by charging higher prices for freight services if the companies are to remain solvent. At the same time, the expenditure of any of the railways' limited resources on passenger services limits further their ability to develop and utilize cost-reducing innovations which will make them more effective competitors for freight business. Those Chambers of Commerce and Boards of Trade and other civic and political groups which demand continued operation of unprofitable passenger services and also call for lower freight rates are asking to, and frequently do, eat and have their cake. They do so, of course, at the ultimate cost of government subsidy covered by higher taxes; an eventuality which they loudly condemn.

IMPLICATIONS FOR ACTION

It follows, then, that at least two important steps must be taken in resolving Canadian transportation problems:

1. Replace the present "value-of-service" rate structure with one based on average costs, and

2. Facilitate the abandonment of unprofitable services and lines.

It is pertinent to ask what the current Royal Commission might do to facilitate action on these problems.

There is little doubt the United States railways have been badly hindered in meeting competition by that country's laws, and more particularly by the cartel-like interpretation of those laws by the Interstate Commerce Commission. The specific recommendations of Professor Meyer and his co-authors are made in light of conditions in the United States, and thus have only limited relevance to Canadian problems. In this writer's opinion, Canadian laws and regulations, as evidenced by such devices as Agreed Charges and Competitive Rates, have been substantially more enlightened and less restrictive. The great need for less regulation of transportation, which exists in the United States, is not of immediate concern in Canada. On the other hand, to the extent that the present situation is the result of the appearance on the scene of competition for the railways, and since regulation exists as substitute for competition, it seems clear that more regulation is definitely not called for.

The job of reorienting the price structure must be done by the carriers, and destroying a price structure developed over many decades and much sanctified by tradition in an industry devoted to tradition more than most is difficult indeed. So is a task which requires a vast amount of staff work in an industry which is notoriously lacking in adequate staff personnel. Both major Canadian railways are moving in this direction, and under existing regulations should be able to make substantial progress towards realizing their inherent competitive capabilities.

If rates are to be based on cost, however, *all* rates must be so based—not only those which are well above cost but those which may be well below cost. It is at this juncture that the present Royal Commission can make a significant contribution. Such a contribution would be to determine whether any rates prescribed by legislation or regulation are at a level below cost. Crow's Nest Pass rates are the foremost example of this possibility. If there are rates arbitrarily held below cost, a rationalization of our transport system demands that they be raised or openly subsidized, and either of these actions is beyond the power of management.

In the sphere of service abandonment, there is much that needs the attention of an impartial investigation. A new standard against which requests for such abandonments can be judged is badly needed. At the present time, the Board of Transport Commissioners is charged with safeguarding the "public convenience and necessity". This is probably a satisfactory statement of what the board should do, but it is essentially meaningless until one defines "the public". Is the public the handful of people using an unprofitable branch-line passenger service, or is the public the thousands of people who have to pay for slightly higher freight rates in order to cover the losses in-

curred in operating the passenger train? Similar problems exist in connection with passenger fares generally, and with the continued operation of many branch lines for a twice-weekly freight train. It must be recognized that revenues from high-rated commodities are no longer available to subsidize passenger services, light-traffic branch lines, and other uneconomic operations. Either a new source of subsidy must be found, or the way must be cleared for abandonment of these services. The latter solution is clearly the way to more economic transportation.

In most situations, the latter solution is the best way to provide more economic transportation, and these necessary abandonments could be speeded up by a more realistic definition of "public convenience and necessity". Subsidy may well be the answer in those cases where service is unprofitable, but is at present the only means of travel and shipment. Positive recommendations from the McPherson Commission on these matters would be a great contribution to the resolution of our transportation dilemma.

CONCLUSION

The foregoing has suggested that the two problems discussed—price structure based on cost, and more realistic criteria for dealing with service abandonments—can be dealt with in part by management and in part by the McPherson Commission if its investigation leads to subsequent legislation and regulation. Realism compels one to add that such suggestions are probably sanguine indeed. The sound economic solution to our transportation dilemma will create other problems which neither railway management nor a Royal Commission could ever solve. To quote Professor Meyer:

> "If the railroads were allowed to rationalize their present operations so as to avoid highly uneconomic portions of overhead and follow a pricing policy more closely tied to marginal costs, the probable result would be a substantial diversion of traffic from highway back to rail."

It requires little imagination to list the many individuals, groups, and institutions who have a special interest in the continued expansion of highway transport. The same modicum of imagination could readily describe the great resistance with which those various interest groups will meet changes which will have such a predictable effect. Let it be clear, however, that any permanent and economically sound solution of the railway dilemma must include action on the two matters discussed here. They are not the only factors, to be sure, which have resulted in the continuing transportation problem, but they are at least as important as any other. Unless they are faced up to and the inevitable consequences dealt with rather than avoided, we will once again be papering over the crack in the wall.

THE CONTRIBUTION OF ECONOMICS

The contribution economics can make to public discussion and policy, although important, is limited. There are many complex problems of policy to which the economist does not know the answer, and many of these involve issues of politics on which the economist is no more competent than anyone else to pass judgement. On such questions there might be more understanding by the public of the issues involved if economists exercised self-restraint and confined themselves to attempting to explain the nature and complexity of the problems, rather than providing conflicting and widely divergent solutions. If such a view of the role of economics and the economist is to gain any acceptance it would mean a radical change, not only in what the public demands of the economist but also in the way in which economics is taught. For, even at the elementary stage, the student is now frequently led to believe that, were it not for pressure politics, grasping businessmen, cowardly, selfish and ignorant politicians, stupid trade unionists, and the perverseness and obtuseness of the public, economic problems could easily be solved. How often is the student of economics now asked in an examination question, to which he is expected to devote half an hour, to solve the problem of inflation, to settle the future of the sterling area, or to prescribe a policy for the economic development of an under-developed country. All so easily solved, to judge by the answers!

—Ely Devons
London School of Economics
Lloyd's Bank Review, July 1959

Forecasting and Market Planning

The demands of long-range market planning have brought about an increasing demand for the use of sophisticated forecasting techniques. In this paper, the author outlines how one of our major automobile manufacturers handles this problem.

R. K. Cowan

The complexities of large scale business enterprise and the inherent tendency for the information system to break down in such an environment has fostered the development of the concept "Scientific Management". The general subject matter of scientific management covers many activities in the business world today, such as organization, planning, directing, controlling, and communicating. All have been subjected to the scientific approach, but none surpasses planning in importance.

While Market Planning is only one part of overall planning, it too is recognized as a vital part of scientific management because of its priority in the sequence of the planning process.

The foundation upon which the market planning process is built is composed of several ingredients, the most basic of which is the scientific research process whereby economic and market factors are blended and seasoned with experienced judgment. Upon this foundation, projections are made which guide management decisions in the areas of marketing, finance, and manufacturing. Such decisions can now be made with the conviction that future risk and uncertainty will be reduced to a minimum. At the same time, there is no known process which will completely eliminate risk and uncertainty in the planning process.

For illustrative purposes, this paper will deal with the business with which the author is most familiar—the Canadian automobile industry. The automobile business is a high-investment, high-risk enterprise, in which irreversible decisions and commitments are made far in advance of production dates. Our fortune rides on decisions made two or three years ahead of the day we introduce a new model. Management must plan for a new model so that it can be produced on schedule, so that some 3,000 dealers can sell it successfully to some 400,000 persons, and so that it will return a profit on the assets employed in the business. To get a successful reception in the market place, the product must be fully competitive in styling, performance, safety, economy of operation, workmanship, and price.

The research job begins with the earliest steps of new model planning and continues through until the new automobile is delivered into the hands of the customer. Factual information is gathered and processed which helps to form the basis for recommendations and management decisions in such specific areas as volume planning, product planning, and communication with customers through merchandising and advertising programs.

At the very outset, questions on volume arise. Even before financial, facility, or tooling plans can be firmed up, management has to make volume decisions. *How many cars* of a specific make and model shall we build? The answer is, of course, the number we can build and sell—no more, no less. If we build too few, we lose sales and profits. If we build too many, we glut our distribution system and have to discount to clear inventories.

The number of cars we can sell then depends on the total automobile market three years hence, and upon our competitive position in that market—how big a slice we can attract.

A. *Economic Factors*

Let us begin by narrowing our observations to one phase of the overall research operation—volume planning. The heart of an economic and market research program is, of course, forecasting. To help answer volume questions, both long-range (five years and over) and short-range (up to one model year) industry forecasts are made. The long-range forecast is made at the inception of the product planning cycle and is used in establishing planning volumes. For this forecast, such economic factors as trends in the general economy, population, income, family formation, cars on the road, and scrappage rates are projected. (Charts I to IV). These charts are a sample of the type of data supplied to our management.

Later, after new model production begins, short-range studies are made which act as a double-check on the original long-range forecast. These studies appraise the overall current economic outlook, chart actual sales performance of new models, and pinpoint any degree of variation between actual and anticipated sales. This information enables management to tailor production schedules to the demands of the market place.

Once the industry sales forecasts are established, both on a long and short-term basis, the stage is set for the volume planning operation.

B. *Volume Planning*

Volume Planning might be defined as the adaptation of sales forecasts to the many particular and specialized planning requirements of a complex business. Several problems tend to make this function as applied to the automobile business more complex, if not more difficult, than its application to most other industries.

The first problem is created by instability in general business conditions. Over a business cycle of about three to five years duration, automobile sales tend to fluctuate widely from year to year. As a matter of fact, car sales in Canada fluctuate substantially more than the sales of other consumer durable goods over a business cycle.

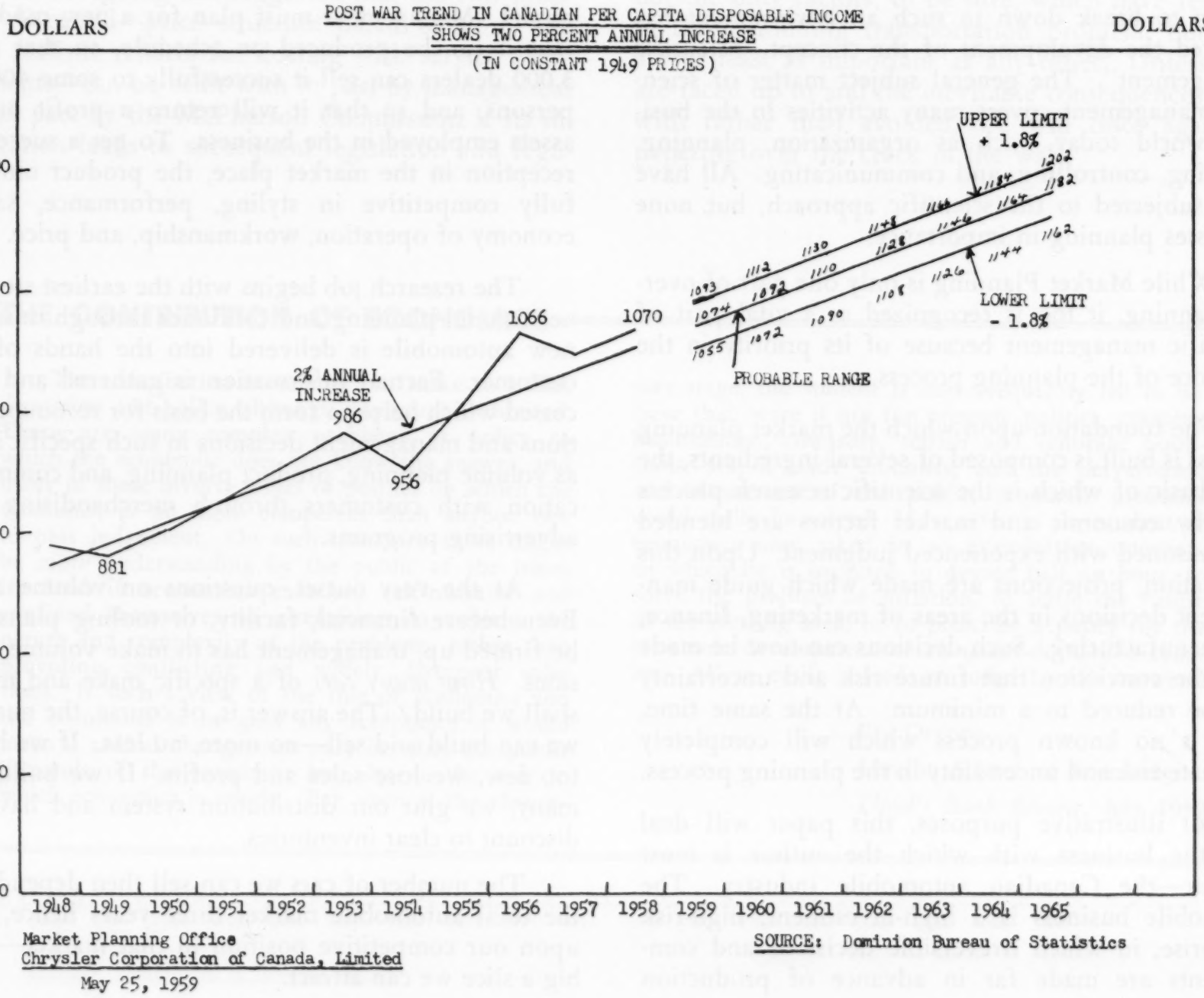
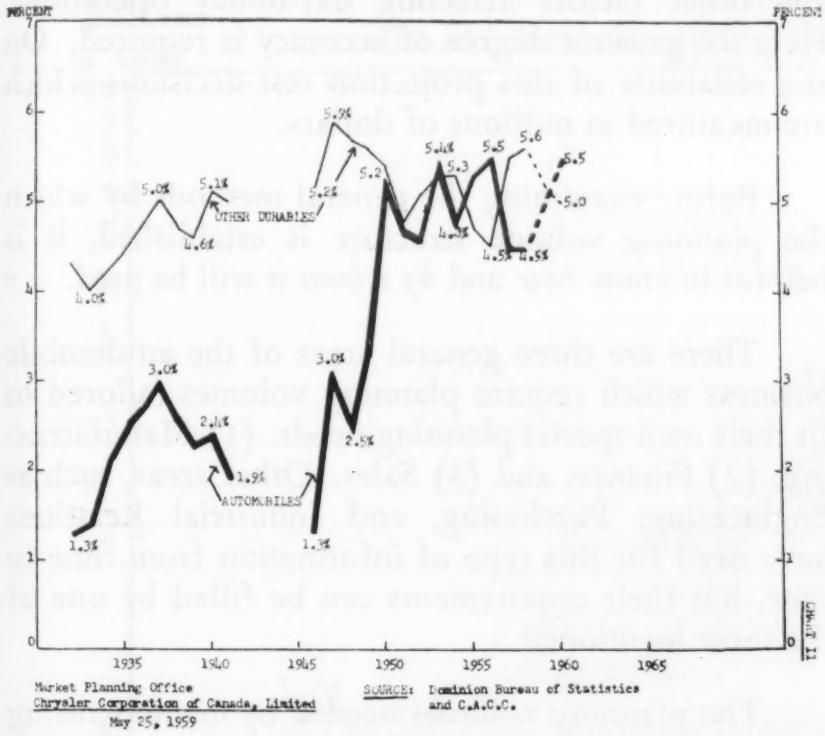


CHART II

PERCENT OF DISPOSABLE PERSONAL INCOME SPENT ON AUTOMOBILES AND OTHER DURABLE GOODS 1932-1958



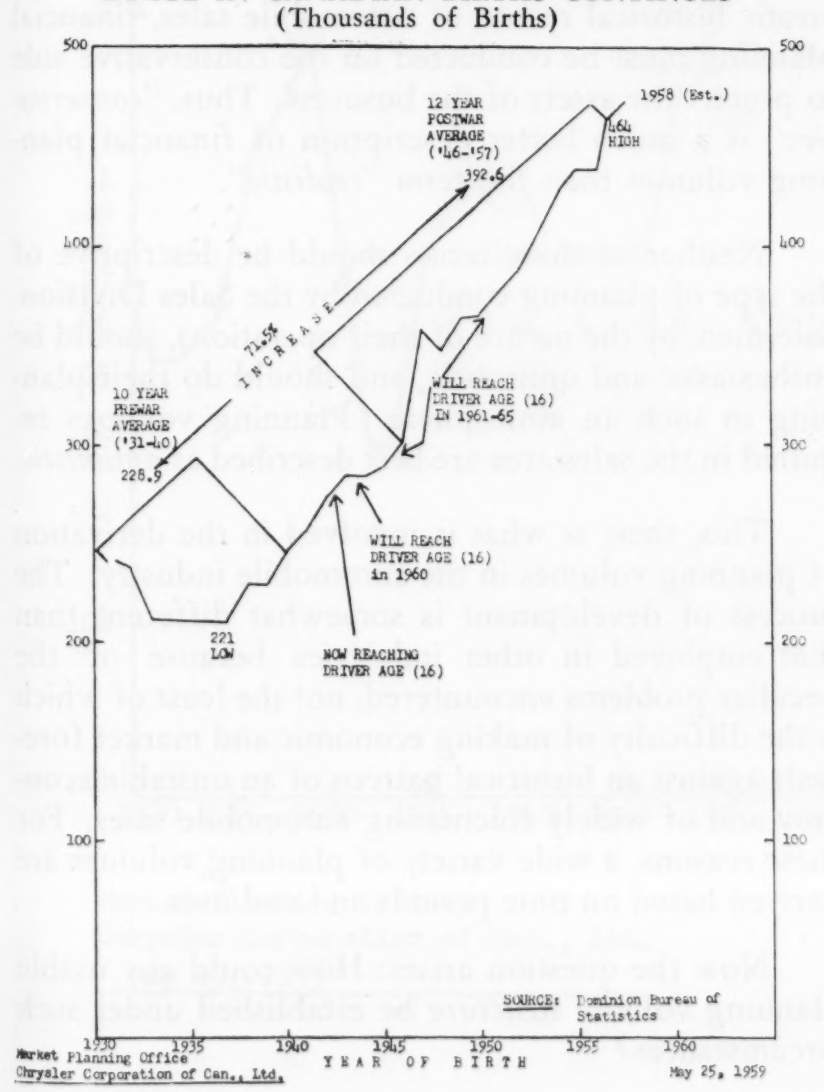
Market Planning Office
Chrysler Corporation of Canada, Limited
May 25, 1959

SOURCE: Dominion Bureau of Statistics and C.A.C.C.

Problem number two is the unusually long lead time required to design and engineer a new model. For example, work is well along on 1961 and 1962 models. The "product planners" are working so far ahead that new models are "old hat" to them when public introduction rolls around. Like most other planning, the development of new models requires volume estimates to determine feasibility from a cost standpoint.

CHART III

BULGE IN CANADIAN BIRTHS CONTINUES
(Thousands of Births)

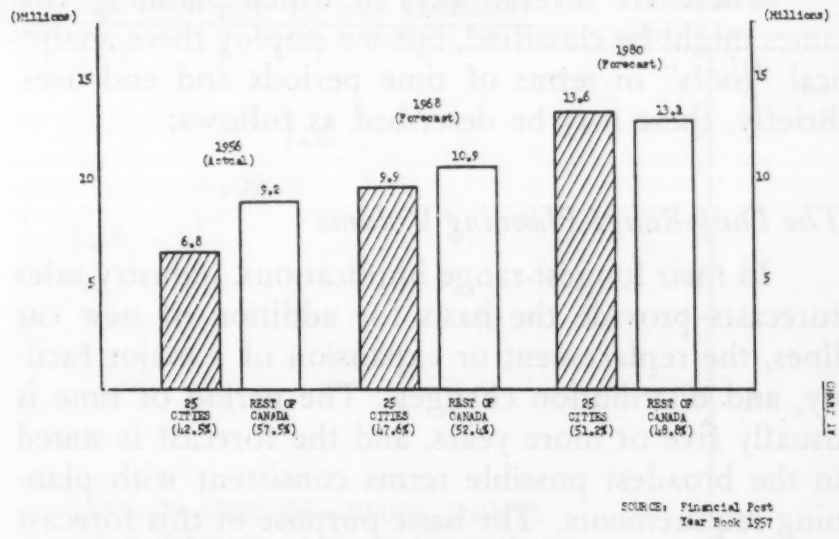


SOURCE: Dominion Bureau of Statistics

Market Planning Office
Chrysler Corporation of Can., Ltd.
May 25, 1959

CHART IV

POPULATION FORECAST
25 KEY CITIES VS REST OF CANADA



SOURCE: Financial Post Year Book 1957

Problem number three is the increasing emphasis being placed upon styling as a means of obtaining product differentiation. The public today has come to expect rather frequent major style changes.

Problem number four is the pressure resulting from mounting costs of new model development. The attempt to satisfy consumer demand for new models through styling innovations has resulted in a sharp upturn in engineering and tooling expenditures. It is a matter of record that Chrysler Corporation spent over $300,000,000 in developing the 1960 line of cars. This amount compares with the $200,000,000 spent on the 1953 models.

Because developmental costs have become so burdensome, volume planners are being asked to provide more accurate forecasts of the potential market for new equipment and body styles. Like many other forecasting problems, factual information is difficult to obtain in this area.

Problem number five is the increasing number of options and accessories being offered with the base car. For example, it is not unusual today for a single car line to be offered with 70 different types of optional equipment, not including the 141 paints and 33 trims available to the buyer. It is easy to see how millions of cars can be produced with no two alike. In fact, the automobile industry today is in the situaton of building cars on a mass production basis, for a custom order market.

Against this background of problems, it can readily be understood why a *single* sales forecast or volume projection cannot possibly fulfill *all* planning requirements. Thus a complete planning volume *structure* has gradually evolved to meet the many forecasting problems described. While the foundation of the economic and market research process is essentially the same for all needs, the forecasts, like

the rooms of a house, are not all designed to serve exactly the same purpose.

There are several ways in which planning volumes might be classified, but we employ these analytical "tools" in terms of time periods and end uses. Briefly, these may be described as follows:

The Long-Range Planning Volume

In their longest-range implications, industry sales forecasts provide the basis for addition of new car lines, the replacement or expansion of a major facility, and distribution changes. The period of time is usually five or more years, and the forecast is stated in the broadest possible terms consistent with planning requirements. The basic purpose of this forecast is to provide a framework for guidance for the future, even though it does not apply to a specific year. For example, it is basic to our company's long-range capital expenditure programs and opportunities for profitable growth.

Once the industry long-range forecast is established, a realistic *Sales Trend* line is derived for that period by the application of the penetration (share of market) anticipated and planned for by the Corporation.

The Intermediate-Range Planning Volumes

Another very useful planning volume is the one designed to cover the next forward body cycle. Some car manufacturers, for example, are now in the second year of a two-year body cycle and are planning completely new bodies and styling for the 1961-62 period. It is essential that volumes be established for each cycle so that planning may proceed on a common base. The information is used to plan facilities and to "tool" plants for the full cycle. In this case, as with long-range volumes, the volume need represents only average expectations for the cycle, not for the individual years.

Short-Range Planning Volumes

Two types of planning volumes fit into this category. First, the Index Volume which is tailored to fit a particular year. It differs from long-range volumes in that it is more specific and is established in greater detail. Model year volumes form the basis for daily straight time operating rates, adjustments of tooling peculiar to the particular model, acceleration schedules, pricing, and other activities necessary to launch a new model.

The final type of planning volume is the near-term forecast which is used to plan current operations. This volume forms the basis for monthly production schedules, material commitments, stock levels, and other factors affecting day-to-day operations. Here the greatest degree of accuracy is required. On the reliability of this projection rest decisions which are measured in millions of dollars.

Before examining the general methods by which the planning volume structure is established, it is helpful to know *how* and *by whom* it will be used.

There are three general areas of the automobile business which require planning volumes tailored to fit their own special planning needs: (1) Manufacturing; (2) Finance; and (3) Sales. Other areas, such as Engineering, Purchasing, and Industrial Relations have need for this type of information from time to time, but their requirements can be filled by one of the three mentioned.

The planning volumes needed by manufacturing can best be described by the adjective—*realistic*. The steps of tooling for production and committing for materials probably involve the greatest monetary risk of all the activities required to manufacture and sell an automobile.

For certain functions a deliberate departure from a "middle-of-the-road" approach may be essential for successful operations. This applies in general to financial planning. Against a background of an erratic historical record of automobile sales, financial planning must be conducted on the conservative side to protect the assets of the business. Thus, *"conservative"* is a much better description of financial planning volumes than the term *"realistic"*.

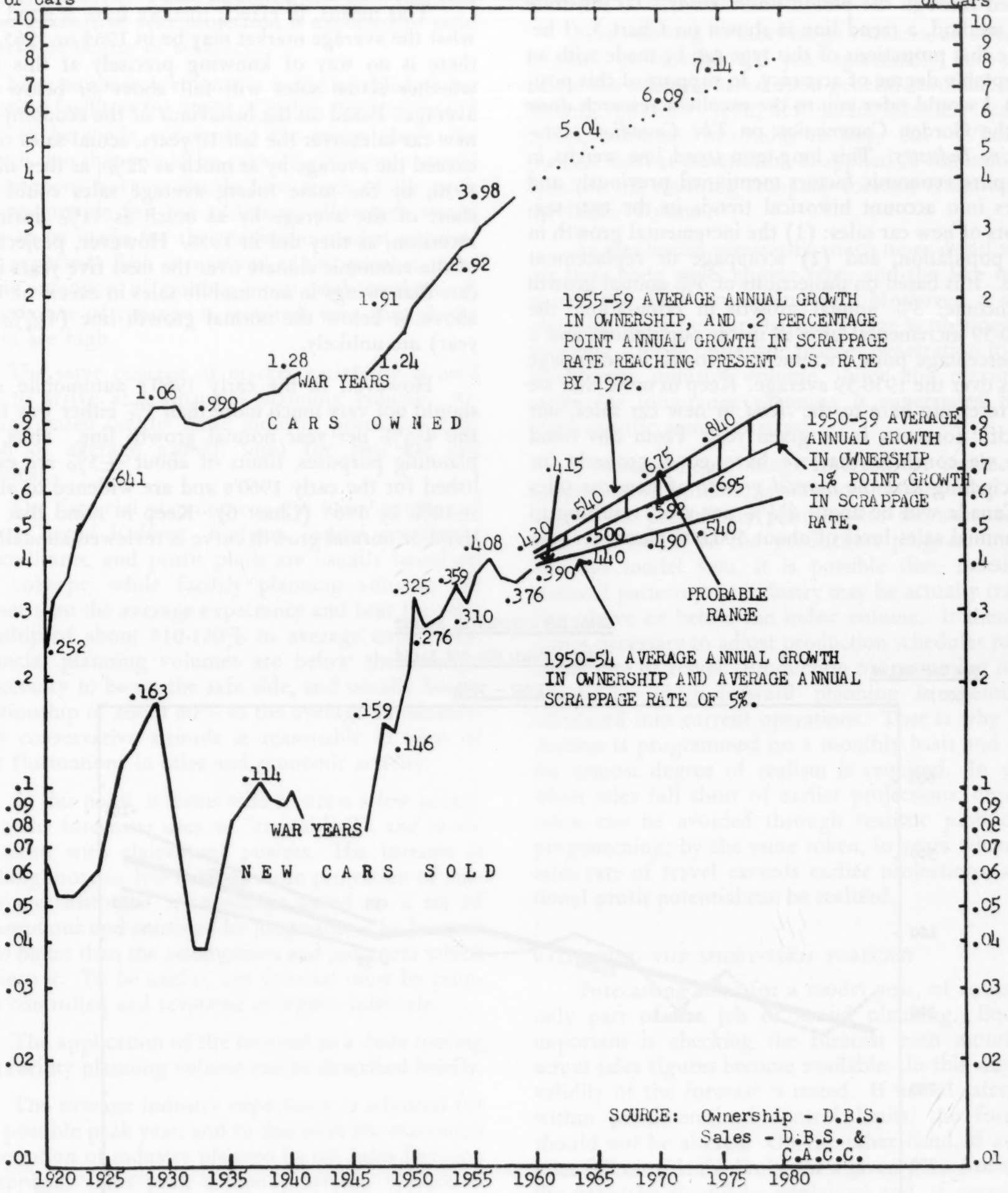
Neither of these terms should be descriptive of the type of planning conducted by the Sales Division. Salesmen, by the nature of their operations, should be enthusiastic and optimistic, and should do their planning in such an atmosphere. Planning volumes required in the sales area are best described as *optimistic*.

This, then, is what is involved in the derivation of planning volumes in the automobile industry. The process of development is somewhat different than that employed in other industries because of the peculiar problems encountered, not the least of which is the difficulty of making economic and market forecasts against an historical pattern of an unstable economy and of widely fluctuating automobile sales. For these reasons, a wide variety of planning volumes are derived based on time periods and end uses.

Now the question arises: How could any usable planning volume structure be established under such circumstances?

CHART V

1965 CAR SALES IN CANADA LIKELY TO RANGE FROM 500 TO 540 THOUSAND



Market Planning Office
Chrysler Corporation of Can., Ltd.
May 25, 1959

ESTABLISHMENT AND USES OF THE VOLUME PLANNING STRUCTURE

First, the long-term trend of new car sales is projected through the period under study. To illustrate the method, a trend line is shown on Chart 5. I believe that projections of this type can be made with an acceptable degree of accuracy. In support of this position, I would refer you to the excellent research done by the Gordon Commission on *The Canadian Automotive Industry*. This long-term trend line weighs in the pure economic factors mentioned previously and takes into account historical trends in the two segments of new car sales: (1) the incremental growth in car population, and (2) scrappage or replacement sales. It is based on projections of 4% annual growth in income; 3% annual growth in population; the 1950-59 incremental growth in car population; and a .1 percentage point incremental growth in scrappage rates over the 1950-59 average. Keep in mind that we are referring here to the *trend* in new car sales, not specific forecasts for a given year. From this trend line we conclude that we have good grounds for anticipating that the *normal growth* of new car sales in Canada will be about 4¼% per year, resulting in an annual sales level of about 500,000 passenger cars by 1965. Of course, in years of high business prosperity, sales will be above this, and in recession years they would be below.

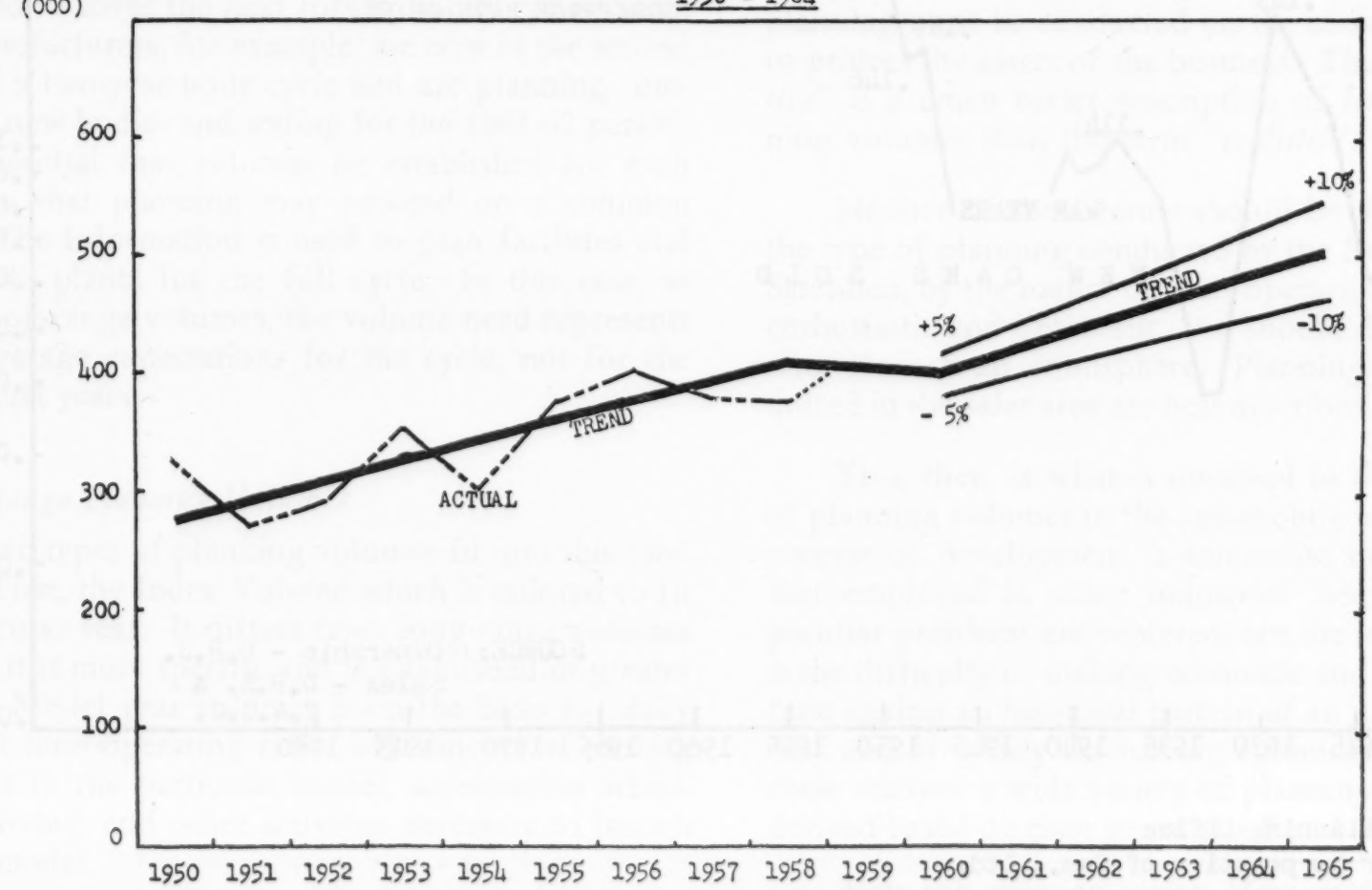
This means, in effect, that we have a good idea what the average market may be in 1964 or 1965, but there is no way of knowing precisely at this time whether actual sales will fall above or below this average. Based on the behaviour of the economy and new car sales over the last 10 years, actual sales could exceed the average by as much as 22%, as they did in 1950; by the same token, average sales could fall short of the average by as much as 11% during a recession, as they did in 1958. However, projections of the economic climate over the next five years indicate that swings in automobile sales in excess of 10% above or below the normal growth line (4¼% per year) are unlikely.

However, in the early 1960's automobile sales should not vary much more than 5% either way from the 4¼% per year normal growth line. Thus, for planning purposes, limits of about ±5% are established for the early 1960's and are widened to about ±10% by 1965 (Chart 6). Keep in mind that this trend or normal growth curve is reviewed annually in

CANADIAN AUTOMOBILE MARKET

TOTAL ANNUAL NEW CAR SALES

1950 - 1964



324.9	275.7	291.1	359.2	310.5	387.0	408.2	382.0	376.4	419.0[e]

SOURCE: D.B.S.

CHART VI

light of current conditions and expectations for the next five years. Thus by 1965, the limits of about ±5% will apply, and these will be widened to ±10% for 1970. Thus, in effect, the first two-year phase of the five year projection is expected to yield a workable degree of accuracy.

Now suppose a volume is being established for planning facilities for 1965. A policy decision would have to be made concerning the range above the growth line that would be covered. Not only would the company have to decide how much of the peak year to provide for, but additional allowance would have to be made for the maximum market penetration expected. Risk is involved at this point if there is any intention of cashing in on peak markets. A high degree of courage is required, even though the stakes are high.

The same concept of market variability is used also to arrive at a financial planning volume. Although based on the same industry projection (the trend or average growth line) the two are not identical.

The financial planning concept today is referred to as *Control Volume*. Budgets, capital equipment expenditures, and profit plans are usually based on this concept; while facility planning volumes are higher than the average expectancy and bear the relationship of about 110-120% to average expectancy, financial planning volumes are below the average expectancy to be on the safe side, and usually bear a relationship of about 80% to the average expectancy. This conservative attitude is reasonable in view of past fluctuations in sales and economic activity.

At this point, it seems wise to stress a few points. First, the forecaster uses no "crystal ball", and is not endowed with clairvoyant powers. His forecast is nothing more or less than a future projection of current and historical relationships based on a set of assumptions and seasoned by judgment. The forecast is no better than the assumptions and judgment which go into it. To be useful, any forecast must be properly controlled and reviewed at *regular* intervals.

The application of the forecast to a daily tooling and facility planning volume can be described briefly.

The average industry expectancy is adjusted for the possible peak year, and to this peak the maximum penetration of industry planned by the Sales Division is applied. This peak company cyclical volume is then divided by the number of available working days to arrive at daily average requirements. Adjustments are then made for (1) the percentage increase for the seasonal peak, (2) the percentage of overtime that will be devoted to the cyclical peak, and (3) the percentage of overtime that will be devoted to the seasonal peak. The resulting figure represents the daily straight-time rate at which the plant should be operated, and forms the basis for planning facilities and tooling.

Now, moving to short-range volumes, an attempt is made to forecast the year specifically above or below the average, based upon general economic conditions, consumer credit, new model stimulus, trading cycles, consumer intentions to buy, etc. When a realistic market penetration is applied to the industry estimate the resulting company forecast is known as the Index Volume.

As mentioned previously, much more detail as to car line, body style, engine type, and the like is required for short-range planning. Moreover, a sales objective or target for the index year is obtained by applying a more optimistic market penetration to the short-range industry volume. Now the maximum range for long-range planning is superseded by a more specific annual forecast.

The second short-range forecast, the production programming volume, is identical to the index volume in the preliminary planning for the next model year. However, as the production program moves into the model year, it is possible that, based on seasonal patterns, the industry may be actually travelling above or below the index volume. It then becomes necessary to adjust production schedules to the actual rate of travel. Production programming is the process by which forward planning is eventually translated into current operations. That is why production is programmed on a monthly basis and why the utmost degree of realism is required. In years when sales fall short of earlier projections, obsolescence can be avoided through realistic production programming; by the same token, in years when the sales rate of travel exceeds earlier projections, additional profit potential can be realized.

VALIDATING THE SHORT-TERM FORECAST

Forecasting sales for a model year, of course, is only part of the job of sound planning. Equally important is checking the forecast each month as actual sales figures become available. In this way the validity of the forecast is tested. If actual sales fall within pre-determined control limits, the forecast should not be altered. On the other hand, if actual sales fall outside the limits for a given period of time, the variation should be explained and, if necessary, the forecast adjusted on the basis of the out-of-control points.

The following system of determining control limits and establishing the rules of the "forecasting game" has been used at our company for three model

years. While it is applied to both industry and corporate passenger car and truck sales, we will, for illustrative purposes, confine our remarks to its use in forecasting industry sales for the model year 1958. The same principle applies for industry truck sales and corporate sales.

Briefly stated, the system can be described in two phases—the establishment of the Control Limits for the model year industry forecast, and the procedure for making necessary adjustments.

Establishment of Control Limits

In determining the control limits for the industry sales forecast for the 1958 model year, the following steps were followed:

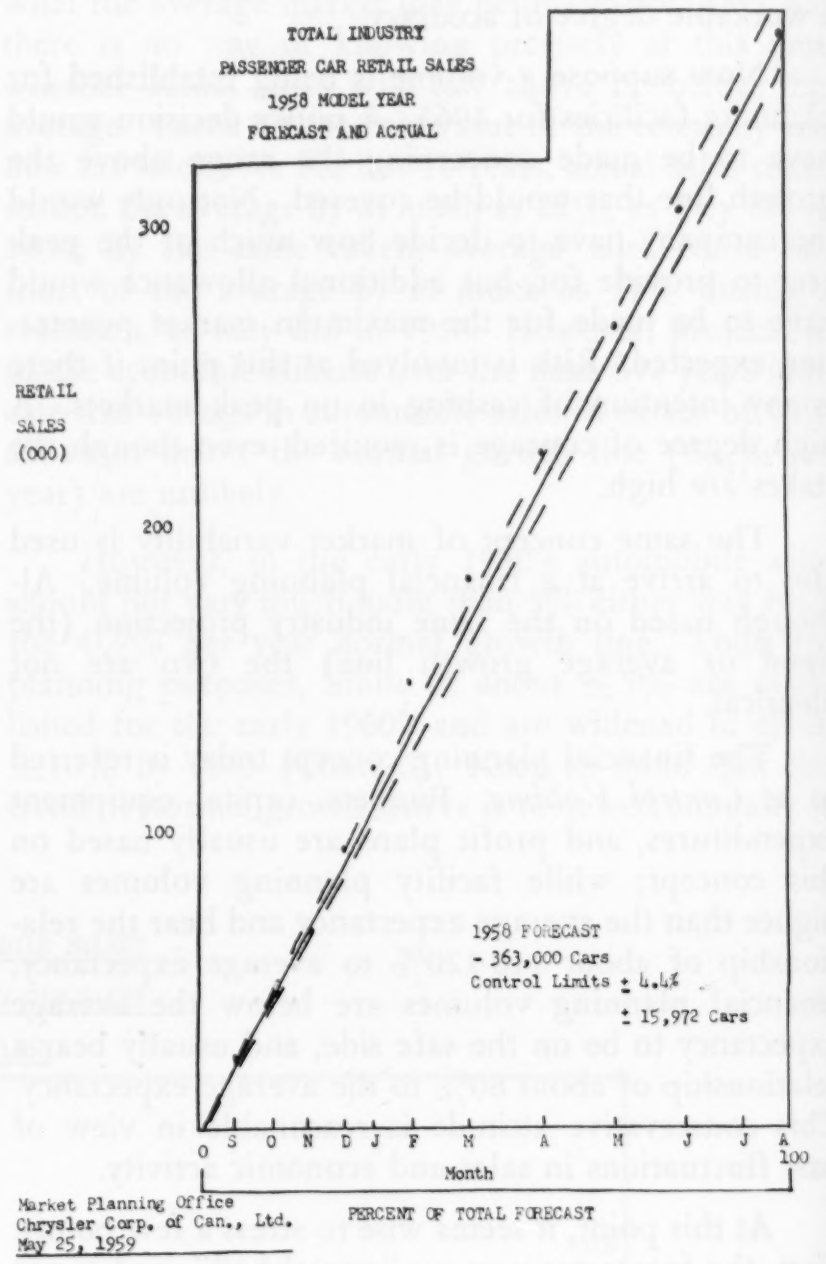
1. Retail sales in units were compiled and cumulated for the model years 1954 through 1957, inclusive.
2. Percentage cumulative actual monthly sales were calculated for the 1957 model year.
3. The percentage cumulative monthly retail sales for the period 1954-57 inclusive were calculated.
4. The deviation between the cumulative percentages in steps (2) and (3) were determined.
5. The deviations were squared and the sum of the squared deviation was taken.
6. The Standard Error of Estimate was derived.
7. Control limits were established = ± (2 x Standard Error of Estimate).
8. Control limits on the forecast for 1958 models were = ± Annual Sales Forecast x Control Limit percentage.

The results of the calculations for the 1958 model year are available if anyone would care to see them. Briefly stated, the standard error of estimate was ± 2.2%, and the control limits were ± 4.4%. For the 1958 model year our estimate was 363,000 units, and the control limits of ± 4.4% or ± 15,792 units were established.

Experience has demonstrated that this system eliminated the normal seasonal variability of the product by comparing the percentage cumulative actuals against a percentage cumulative historical for the past four years. Moreover, it has relatively narrow control limits and is quite sensitive. For these reasons we are able to adjust more quickly for changing sales trends.

Chart 7 illustrates graphically the control system for the 1958 model year. Forecasted cumulative sales figures are plotted along the solid line beginning at 0 and running diagonally upward and to the right. The total model year cumulative figure (363,000 units) cuts the vertical axis on the right at that point, indicating the last month of the model year (August 1958).

CHART VII



The control limits ±4.4% are plotted as broken lines above and below the sales forecast.

Rules for Adjustments

Every short-term forecast allows for variations within statistically supported limits. If actual sales are proceeding "in phase", i.e. within these control limits, the forecast is still valid. Should cumulative actual monthly sales fall outside these limits for three consecutive months, then the variation must be explained and/or adjustments made to the forecast.

The heavy dots plotted show actual total industry passenger car cumulative retail sales for the 1958 model year. A brief examination of the chart shows that although during the year in some months sales did not follow the forecast trend, the variation was short-lived and sales fell back within the control limits of the original forecast. For example, in January, February and March sales appeared to be moving

outside (above) the control limits. By February it was clear that this was *not* a signal to revise the forecast. The variation was due primarily to special factors at work which were altering the seasonal pattern evident in the base years 1954-1957, e.g. weather and income factors such as an unusually mild winter in Western Canada, special government wheat payments to farmers in the West, and a strong U.S. demand for Western Canada's beef-steak. In other words, the explanation was to be found in factors in one sector of the Canadian Market—Western Canada.

Thus the original total industry forecast was still, in our judgment, a valid one. In this case it proved to be quite reliable: actual sales came in at 363,500 units compared with the original sales forecast of 363,000.

At this point I would like to pay tribute to "Lady Luck". Perhaps she has not been given her due credit for the important role she plays in forecasting. However, in the break-out of the total industry sales estimate by North American built and European imports, she let us down a bit.

We had assumed that European cars would increase their share of total sales in Canada in the 1958 model year, but in the summer of 1957 we did not visualize the magnitude of that increase. Of the 363,000 units forecast, we assumed that North American cars would take 313,000 units (about 86%), and European imports would take the residual 50,000 units. Using the same technique as that described above, we set control limits of $\pm 7.2\%$ on North American and $\pm 1.8\%$ on European. We still haven't lived that one down. However, our control system alleviated the error in judgment. By January of 1958, we were able to adjust the North American estimate downward and the European upward in line with the newly-emerged market pattern.

CONCLUSION

It is by no means the author's intention to give the impression that this, or any other system of establishing and controlling a forecast, is infallible. Far from it. However, it is a step in the right direction. The rapid development of data processing equipment will continue to open a vast new frontier for the forecaster. Instead of working with only three or four variables, he will in the future be expanding the list to 30 or 40, or even more. Thus, the frontiers of planning and scientific management are not closed; they are just beginning to open up.

NEEDED: MORE CANADIAN RESEARCH

There is one area which is underdeveloped in Canada.

I refer to engineering, design and creative research with particular reference to Canada's growing secondary industry.

Canadian business has such ready access to the results of this class of work in the U.S. and the U.K. that our own activity in these fields has been limited.

Product research is an important function of modern industry, and engineering and design important departments of manufacturing.

Doing a minimum of this class of work has meant a lack of self-sufficiency with a corresponding lower industrial stature.

A company can buy such results but the purchase does not bring with it the comprehension and understanding of the fundamentals of these important elements of modern fast-moving business.

Product quality, costs and timing cannot help but suffer if such basic thinking is missing.

More of this class of work can be done in Canada and we would have a healthier and stronger industry thereby.

—Carl A. Pollock, President,
Dominion Electrohome Industries Ltd.

Basic Issues In

CANADA–SOVIET TRADE

In this second article on the subject of Canada-Soviet trade, Mr. Myers considers the nature of the trade problems and the alternative solutions that have been advanced. In preparing his paper, he has surveyed the views of some of Canada's leading businessmen.

J. G. MYERS

It is important in the current movement towards a relaxing of tensions between Russia and the West that we not overlook the very serious threat which Russia poses to us on the economic front. For while the cold war appears to be thawing, there are wintry days ahead in foreign trade. Although Canadian business has thus far been little affected except perhaps in non-ferrous metals, expectations are that severe effects will be felt within the next five to ten years.[1]

One leading U.S. business publication recently commented:

"It is . . . easy for individual businessmen and the nation's leaders to hope that an increased exchange of goods with the Soviet Uion will yield better understanding as well as profit. Yet clearly, both moral and practical considerations show that this is a delusion. Some day Russia will be ready once again to play an important part in the commerce of the world. That time, the evidence suggests, is not yet."[2]

The question of what, if anything, Canadian businessmen can and should do to counteract the Russian economic threat can be resolved only by recourse to fundamentals. Does Russian trade really pose a threat? How serious is it? What are Russia's trading motivations? Should we trade with Russia? What alternatives face the Canadian businessman? Which, if any, should be adopted?

Clearly, any discussion of these issues cannot for long remain in the realm of economics alone. Also involved are fundamental questions of politics, philosophy and ethics, and it is to questions such as these that Canadian businessmen must address themselves in planning future action. The purpose of this article is to raise and help clarify the basic issues.

In evaluating these key issues, the author has undertaken an informal and qualitative mail survey of the views of some of Canada's best-informed and most influential businessmen. Eleven detailed replies were received to a selective mailing; six preferred to remain anonymous, while five of the respondents gave permission to be quoted. These five were:

A. C. Ashforth, President, The Toronto-Dominion Bank.

James S. Duncan, Chairman, The Hydro-Electric Power Commission of Ontario.

Cyrus Eaton, Chairman of the Board, Chesapeake and Ohio Railway.

I. E. Lenard, Executive Director, International Patented Products Limited, and Past President of the Canadian Exporters' Association.

F. T. Sherk, President, The H. J. Heinz Company of Canada Ltd., and Immediate Past President of The Canadian Exporters' Association.

The comments of these and other prominent spokesmen will form the basis for our discussion of the basic issues in Canada-Soviet Trade.

[1]See the earlier article, "Soviet Trade and Canadian Business", by J. G. Myers, *The Business Quarterly*, University of Western Ontario, Summer 1959.

[2]*Barron's*, October 5, 1959.

HAVE WE ANYTHING TO FEAR FROM RUSSIAN TRADE?

In one sense, Canada probably has little to fear from Russian trading activities, insofar as these are concerned with such things as extension of low-interest loans, barter agreements, trade agreements, propaganda, publicity, dumping and price-cutting, disruption of markets (particularly for so-called single-commodity countries), etc., Russia could continue to disrupt foreign markets of some Canadian manufacturers, but this might be considered more "rough competition" than economic war.

But in a wider sense, this question really concerns the potential of our economic system in relation to the Russian. This question is much more difficult to answer. When it comes right down to it, have we the stuff that it takes to dig in and compete? In order to compete, is it necessary to give up some measure of freedom? Are we—should we—be willing to give this up in order to compete?

Let us begin our consideration of these issues by examining where we stand today in the economic battle. The following list of conclusions taken from a report prepared for the Joint Committee on the Economic Report of the United States Congress[3] gives a comparison of the trends in economic growth of the Western Powers and the Soviet Bloc:

1. The present economic capacity of Western Europe, the United States, and Canada is significantly greater in terms of absolute magnitudes, diversity, and flexibility than the combined strength of the Soviet bloc.

2. In the period 1938-53 as a whole, the national product of the United States increased about three times as rapidly as that of independent Europe, and almost twice as rapidly as that of the Soviet Union. Between 1948 and 1953 the national product of the United States grew not quite 30% faster than that of independent Europe, and only two-thirds as fast as that of the Soviet Uion.

3. An examination of the various factors of production (growth of labour input, agriculture, housing, etc.) in the United States and in the Soviet Union today gives strong grounds for expecting that the absolute gap in the size of the two economies will widen over the next two decades, although the rate of growth in the Soviet Union might be somewhat higher than the rate of growth in the United States.

4. Economically, Western Europe has been growing somewhat more slowly since 1938 than has the Soviet Union, although its growth has been more rapid than that of the captive countries. If the rate of growth of Western Europe is not to fall further behind that of the Soviet Union it is necessary that certain "bottlenecks" be eliminated.

5. A major reason for the slow economic progress of the captive countries of Eastern Europe has been the tremendous drain of their resources by the Soviet Union. As in the Soviet Union, the weakest sector has been agriculture.

6. Per capita personal consumption in the United States is more than 40% higher than it was before the war, while in independent Europe it has risen, on an average, by 11%. In contrast, per capita personal consumption in the Soviet Union and Poland is barely above the prewar level; in other captive countries, especially East Germany, it is still below that level. Thus differences in living standards between the East and the West have widened over the past 15 years.

7. Prior to the war Eastern Europe was more dependent, tradewise, upon Western Europe, than Western Europe was dependent upon it. Since the war, trade between these two regions has contracted greatly.

8. Careful consideration should be given, on the one hand, to the restraints of East-West trade that are important for direct military reasons and, on the other, to the desirability of cultivating friendship with the people in Communist countries via trade in non-strategic goods. The line of demarcation between goods in each of these categories and other goods should be drawn as clearly as possible. At one extreme is the possibility of cutting off all trade between the free world and the Communist bloc. At the other, is the possibility of encouraging the importation of needed raw materials from Communist countries in exchange for consumer, as opposed to producer, goods.

9. The West has tremendous economic power whereas the Soviet bloc, through propaganda and unfulfillable promises, has been hiding its lesser economic strength. It is in the interest of the United States that these facts be made known throughout the world, particularly in underdeveloped areas.

10. The Communist bloc will continue intense efforts to increase its output, especially heavy industry, with little regard for human costs. In view of this fact, appreciation of the substantial successes of the United States and independent Europe, acting in close cooperation, in achieving both industrial expansion and better living is essential. Such cooperation, continued in the future, can serve as a basic weapon in the East-West struggle.

[3] *Trends in Economic Growth,* a comparison of the Western powers and the Soviet bloc by the Joint Committee on the Economic Report, January 3, 1955.

11. It is important that the Western countries intensify their efforts in the field of education. The more immediate need is to train adequate numbers of scientists, engineers and technicians. In the longer run, it is essential to keep raising the level of general education.

12. Superiority in economic strength and economic growth are desirable ends in themselves, but they do not assure political and military security. In fact, an economy that is already largely mobilized for war can operate with great effectiveness, and for some time, against a considerably stronger economy that is not so mobilized.

The present level of economic mobilization, in relation to national resources, is greater in the Soviet bloc than in the United States, and especially than in Western Europe. For this reason, the Soviet bloc can bring its full military strength into action more rapidly than can the West. For the same reason, and because the total resources of the West are greater, the West can ultimately mobilize overwhelmingly greater economic strength than can the Soviet Union, given enough time to do so."

With this as the economic backdrop, let us turn to the question of whether we as a nation have something to fear from Russian trade. This question was asked of a group of Canada's leading businessmen with considerable experience and knowledge in the field of international trade. Here are some of their replies:

James S. Duncan:

"Yes, and this danger will increase as her production increases. Fundamentally, the danger, and this applies to China also, springs from the fact that the high cost economies of the Western World have lost the advantage which they always had over the low cost economies of greater scentific developments, mass production technologies, superior machine tools and equipment. Russia has caught up with the West in mass production methods and manufacturing processes but still has cheap and abundant labour and consequently low-priced raw materials.

"This conjunction of cheap labour and raw materials on the one hand and comparable technologies on the other will present a challenging problem to the West.

"These are the elements of which the cold war is made and the sooner the Western World realizes the nature of this challenge the sooner, it is hoped, she will be able to take the necessary measures to meet the situation."

F. T. Sherk:

"Speaking for myself and the type of business in which I am engaged, I would say definitely—No. Our products will compare favourably with similar products produced anywhere in the world including Russia and I believe that this would apply in most instances to all Canadian products."

I. E. Lenard:

"The answer would depend on Russian intentions. As present Russian intentions are based on assumptions rather than known facts, we cannot tell whether we have something to fear or not. There can be no doubt, however, that if Russian trade policies take a certain direction, we would have a lot to worry about, both as a nation and as businessmen."

A. C. Ashforth:

"Let us not indulge in the luxury of underestimating the Communist economic threat to our way of life. Khrushchev has announced Russia's determination to rank first in the world in output per person within the next 12 to 15 years. I believe his country is attempting too many things too quickly, that she is trying to run before she can creep, and that her plans are too ambitious. However, we must not rest on our oars in the belief that there is some intrinsic value to the free enterprise system that—necessarily and always—ensures it will win without half trying."

RUSSIAN TRADING MOTIVATIONS

As Mr. Lenard has pointed out, a fundamental assumption must be made regarding the motivation underlying Russia's trade moves. Are these merely the reflection of normal economic growth and pressures, or are they politically inspired, designed to harass and weaken the Western economies?

In an earlier article, it was concluded that Russian trade would be used to political advantage when it was possible and profitable. Internal pressures of the expanding Russian economy restrict the amount of production that is available for political maneuvering and, in many cases, even though products are available, it would not be expedient to use them for political ends. Thus by no means all of Russia's trading moves are based solely or even largely on political considerations.

This also seems to be the consensus of opinion of some of our leading businessmen on the question: Are Russian trade moves politically inspired?

Cyrus Eaton:

"I have (also) made a point of meeting many of Russia's top officials, from Premier Khrushchev on down, and I am impressed with them not as doctrinaire fanatics, but as practical men who will take their business commitments seriously."[4]

James Duncan:

"They are both politically and economically dependent on requirements of foreign exchange, desirability of establishing trading relationships with certain countries, etc. I am inclined to believe, however, that the political motivation is the predominant one. In a guided economy of the Soviet type, where the comfort and well-being of the people is given but scant consideration, it is always possible to export items, even if in short supply at home, and to direct these where they can be most upsetting to the economy of the Western World or to be used to foster close ties with nations whose allegiance they are seeking."

F. T. Sherk:

"Primarily political. However, I believe that Russia is anxious to increase trade with non-communist countries, but that economic trade motivations would first be considered as to their effect politically. I further believe that if the effect was considered unfavourable from a political standpoint such motives would be dropped."

I. E. Lenard:

"This is a most difficult problem to assess, as we must deal with suppositions as far as Russian intentions are concerned. All policy statements regarding trade originating from the Kremlin must be taken with a dose of salt. The actual trading facts tend to be confusing because the trade policies of Russia are being governed by on and off methods. This leads me to believe that, at least for the time being, the trading pattern is based on political considerations as far as exports are concerned."

A. C. Ashforth:

"There is little doubt that these disruptive forays from time to time are due either to errors in Soviet planning, or an effort to injure Western trade. It is conceivable, for example, that nickel output of the Sino-Soviet bloc has failed to live up to expectations. Or perhaps nickel is being stock-piled for military reasons. Still the possibility remains that the metal is being hoarded for eventual dumping whenever it best suits the needs of the centrally-planned economies in their trade war with the West. Certainly recent experience has shown a Soviet fondness for sudden and unexpected sales in the highly sensitive metal markets."

Perhaps the only real conclusion that can be drawn is that no one can be sure of Soviet trade motivations. The Russians have indicated by their actions that they are, at times, willing to sacrifice profits for political gain, and if nothing else, this should tip off the Western businessman to the fact that he must be doubly cautious in his dealings. One writer sums up the danger as follows:

> "The most important thing in trying to evaluate the implications of the Soviet program is not its present or potential magnitude or even its geographic or commodity or project content, significant though all these aspects are. It is rather the necessity to keep before our eyes the picture of the Soviets ceaselessly driving for ultimate communist political goals, probing for weak spots in the Free World which can be exploited by a variety of means and in a myriad of costumes and poses."[5]

The recent thaw in the cold war promoted by Mr. Khrushchev's visit to the United States, increased Soviet trading activity in Europe[6], and the increased use of Soviet credits at low interest rates are perhaps some of the things which Mr. Sapir would suggest we "keep our eyes on".

SHOULD WE TRADE WITH RUSSIA?

Although this question might seem to be answered by the fact that we are already doing so, a great deal of controversy still exists concerning the extent to which we should so trade. The question is considered here because it is basic to one of the real alternative courses of action that could be taken by Canadian government and business in combatting the problem—that is, placing embargoes on trade with Russia.

One of the strongest advocates of Russian-American trade is H. J. Berman of Harvard University, who in July, 1956, wrote in *Export Trade and Shipper* concerning potential U.S. trade with the Soviet Union. Mr. Berman pointed out that Russia had

[4]Quoted in the *Wall Street Journal*, July 3, 1959.

[5]"The New Role of the Soviets in the World Economy", M. Sapir, Committee for Economic Development.

[6]On October 15th, 1959, for example, a newspaper announcement declared that the Soviets had asked Italy for commercial credits of $100,000,000.

many products which she wanted to trade with us, and in his opinion, restricting trade could well hasten the development of Soviet industry. To emphasize his remarks, he quoted a statement by Mr. Khrushchev, who had said, "we thank you for your embargo upon us; it has forced us to become self-sufficient in many products which we used to import."

Opposed to this view are those who state that we should have nothing to do with the Soviets because they cannot be trusted. Also, advocates of this argument suggest that by trading we run the danger of becoming tied to Russia, and that by so doing we would be in danger of having our economy partially controlled by Russians. By trading, and particularly by providing highly-developed machinery which can be quickly copied and manufactured, we stimulate development of their economy. This, in turn, enhances their power to do us harm—or so runs the argument.

What do our business leaders think? Here is a sampling of views on the question:

Cyrus Eaton:

"From day to day, the Soviet Union is vividly demonstrating that, far from being a feeble or faltering economy seeking a handout, it has taken a firm place as a front-rank industrial power, possessing vast resources and hard working people, ambitious to excel in every field of modern life. In this very success of the Soviets lies the brightest prospect for both bypassing the cold war-hot war impasse and building up brisk and profitable business between the United States and the U.S.S.R. To carry out its far-reaching plans, Russia must import vast quantities of equipment, machinery and materials."

James Duncan:

"Yes, I am in favour of doing so to the greatest extent possible."

F. T. Sherk:

"Trading nations are usually friendly nations. Trade in non-restricted items would certainly be one means of familiarizing the average Russian with our products, and likewise our people could learn more about Russia, their habits and their talents. This, of course, refers specifically to non-restricted items."

I. E. Lenard:

"Imports fall into two categories. First of all, basic necessities or food stuffs; in other words, items in which the U.S.S.R. seems to be short of supply. Secondly, imports which are purchased for political considerations. There seems to be sufficient evidence to support a planned programme to tie the economies of certain countries to Russia, probably with the intention in mind to obtain strong control over these countries after traditional export markets have become lost.

"I cannot see much advantage for Canadians to trade with Russia. There might be some short term advantages, but in the long run it is not made possible for us to actually develop a demand for our goods. Russia will purchase from Canada while political or economic considerations make this desirable. Nevertheless, it would be unrealistic for us to believe that we are building up a trading relationship on which we might be able to count for the years to come."

A. C. Ashforth:

"I wonder if there is not room for expanded trade between our country and indeed the Western World and the Sino-Soviet nations. The recently announced UK-Soviet trade pact is a step in this direction and should expand the mutual trade of these countries considerably in the next five years. When in Russia, I was told of a wide range of products which they wish to sell to us, ranging from furs, crab meat, and linen to vodka, industrial diamonds, anthracite coal, manganese and chromium ores, and machine tools. The Chinese market is a glittering prize and a possible outlet for our wheat among other things. Surely these countries have products of an ordinary commercial or non-strategic nature which would sell in Canada. This is a field which our private traders might well explore closely."

In considering this question, businessmen, of necessity, must concern themselves primarily with non-restricted items. A large part of our export business goes to the United States and Great Britain, and is influenced by the foreign policies of these two countries through their subsidiaries located in Canada. There are, however, a number of Canadian exporters who may be interested in exporting to Russia, or Canadian importers interested in importing from Russia. To them it is difficult to argue against trading with Russia, particularly if the trade is profitable. However, there are several technical trading problems which must be considered.

Mr. Walter Lattman, vice-president of Massey-Ferguson, in an address to the export study club of the Canadian Manufacturers' Association, mentioned that Russian businessmen had complained

about buying goods from Canada because "Canadian firms consulted refused to quote f.o.b. vessel and to accept payment against bill of lading." All other countries were willing to quote f.o.b. vessel and to accept payment against shipping documents. Professor Berman of the Harvard Law School speaks of Russia's "tremendous conservatism, strict application of commercial rules and lack of flexibility, with regard to the development of commercial law" as being serious handicaps to foreign trade. The Russian Ministry of Foreign Trade has the power to withdraw export licences, and the foreign exporter must deal with this body rather than the businessman from whom he is purchasing or to whom he is selling his goods. Professor Berman also explains that "in the field of patents, the absence of a treaty plays into the hands of the Soviets. Copies of American patents are easily available and American patents are freely used whenever savings in production can be achieved." In a speech to the American Management Association, Professor Berman gave the following explanation of legal complications in dealing with the Soviets:

"The legal responsibility of Soviet Foreign Trade Agencies vis-à-vis foreign firms is usually not contested on the ground of immunity that a state agency would claim on the basis of state sovereignty. Such a claim probably would hurt their good renown. In some marine cases claims of immunity were invoked. Proper contractual provisions can circumvent many difficulties. It is well known that the Soviets consistently refuse outside arbitration. They even went so far that in a case of an Italian buyer of Soviet cotton, they offered to reduce the price, on condition that he accepted arbitration by a Soviet arbitration court. Not long ago, the Soviet court of arbitration refused an Israeli claim for compensation, when licences for shipments of oil to Israel were withdrawn. This was a severe blow to the reputation of the Soviet court, since the legal assumption was that in the absence of a provision in the contract, the exporter was undoubtedly liable to compensate Israel for the loss of contract. It can be assumed that a proper provision in a contract would protect a foreign buyer.

"There is no uniform advice on how to negotiate with Soviet Trade Organizations. In some cases deals are concluded easily, contrary to expectation; on other occasions, protracted talks leading to frustration and exasperation are suddenly relieved with an about-face of the Soviet side. We should remember that Soviet negotiators are often under severe strain and use hard bargaining methods as a personal protection against criticism by their superiors. A friendly personal relationship is very important. A person with good contacts of long standing should have more success, since the Soviets prefer to deal with the same foreign negotiator. A trade agreement with the Soviet Union would be useful, as it would normalize our relations and remove many difficulties which stand in the way of larger trade. Some difficulties impeding trade could be removed. The Soviets have a legitimate complaint about our licensing system. They cannot be sure to secure an export licence even for non-strategic goods and have no guarantee that a licence would not be withdrawn. In the case of several American corporations supplying an aggregate unit to the Soviet Union a joint application for licence would achieve better results.

"There seems to be some hesitancy on the part of American producers to trade with the Soviet Union. Very often the U.S. government is sounded out beforehand on its views and is asked for advice. The initiative however belongs to private businessmen and not to the government, and more vision and enterprise is needed."

ALTERNATIVE COURSES OF ACTION

Many suggestions have been made concerning the direct action that businesses or government should take to combat Russian trade moves. Many of these suggestions are quite specific, and at best offer only partial solutions. More important are the issues they raise. For example, many of the proposals would result in government subsidization of business—should this be encouraged? Other solutions widely offered would involve the formation of trading groups made up of representatives from government and industry to counter Soviet trading moves. This would clearly mean putting aside our tradition of individual, competitive business units each with the freedom to act as it sees fit—do we really want to do this?

These issues were presented to our panel of business leaders. This was the question:

"Would you agree or disagree with these alternative courses of action:

"a) Subsidization of business (in any form) when it becomes necessary to counter Russian moves?

"b) Formation of special businessmen's trading groups comparable to those in Russia?

"c) Instilling a sense of urgency and sacrifice into Canadian people?

"d) Active solicitation of Russian business by Canadian businessmen?

"e) Speed up of international commodity agreements, lowering of tariff barriers, formation of free trade area with the U.S.A., U.K. or some other country or group of countries?"

The replies received were as follows:

James Duncan:

"Yes, I can visualize situations where a subsidization of a certain business might be necessary. This is, however, but a palliative and we must look to more basic measures if anything permanent is to be achieved.

"In that the Communistic system of trading is so very different to ours and many of their officials possess neither the machinery nor the knowledge which enables them to deal with individual firms, it may well be that we will have to set up trading groups, perhaps even under Government auspices, who could deal with the Communist countries on a basis which they understand and are equipped for.

"I find it difficult to answer question (e) because it covers so much ground. I am generally in favour, however, of gradual reduction of tariffs and the progressive formation of free trade areas.

"The weakness of the West vis-à-vis the Sino-Soviet bloc is that our approach is a fragmentary one whereas theirs is one of unity.

"Because of this basic weakness in our Western set-up, I favour any movement which tends towards the unification of the Western World. I place the European free trade area and a potential Canada, U.K., U.S.A. free trade in this category, but naturally such radical departures, with all their upsetting influences could only be approached one step at a time."

F. T. Sherk:

(a) "No. I do not believe in subsidization under any circumstances.

(b) "No. I do not feel that an organization controlling foreign trade such as described for Russia could possibly work in a democracy.

(c) "I would say that this would be unnecessary unless the situation changes drastically and I do not anticipate anything of this nature happening.

(d) "Yes, on non-restricted items only.

(e) "No comment."

I. E. Lenard:

"Subsidization of Canadian exports with a view to counter Russian moves would be disastrous for us. Nothing could suit the Russians more. After thoroughly depressing prices, markets, trading patterns, etc., they would pull out leaving us holding the bag.

"The formation of trading groups comparable to those in Russia cannot be supported. This would run contrary to Canadian laws and principles. Furthermore, trading groups have the tendency to become highly monopolistic, leading to many evils, among them inefficiency.

"There is no harm in soliciting Russian business in non-strategic goods, as long as it is fully realized that trading must be on their terms, and generally-accepted safeguards of international law do not apply.

"Broadening the basis of international commodity agreements would help many underdeveloped areas more than it would help Russia. There seems to be growing pressure on the part of many 'one-crop economy' countries to safeguard themselves from large scale fluctuations. Rapid price fluctuations can have most serious repercussions, perhaps leading to a more fertile climate for the spread of communism.

"Tariff negotiations with Russia are completely meaningless. Any concessions granted would be entirely one-sided. It must be remembered that it is not tariffs which bar the entry of foreign goods into Russia.

"I am not going to comment about free trade areas with the U.K. or the United States, as this would have to run over many pages."

An interesting solution offered by the Hon. Thomas B. Curtis of the United States House of Representatives at a seminar of the International Management Division of the American Management Association in New York on November 5th, 1958, was the creation of a trading corporation with an initial capital of $1 billion to be used to underwrite the difference between the free market price offered by U.S. corporations and the uneconomic price that a Soviet trading corporation could offer.

It is not the purpose of this article to discuss the advantages and disadvantages of each of the many solutions that have been offered. However, it is important that businessmen clearly see some of the implications of these solutions. As has been pointed out, many would, in effect, be a call for business assistance by government subsidization. The suggestion of a

government fund to make up the difference between what the businessman gets and what he should get is an example of direct subsidization. Tax concessions, special financing or insurance arrangements, special government bureaus set up to assist business in fact-finding and dissemination of information, increases in tariffs, special business or premiums are, in effect, subsidization of business by government. In the short run, subsidized assistance can undoubtedly be beneficial to the businessman, if for no other reason than that he can plan the management of his resources with greater assurance that he will have an export market for his products. Let us beware, however, that we do not aggravate the problem of high-priced production by such measures. Most government revenue, in one form or another, comes from business. Insofar as our inability to compete is due to inefficiency, it makes little sense to help business become more inefficient. Subsidization is also dangerous to business because it increases the possibility of control by an organization not motivated by profit-making. If our inability to compete is due to politically-inspired trade moves, let Government assist business, but not to the extent that the assistance could be handled more efficiently by business itself.

The second major solution offered to the trade threat is the possibility of setting up planning groups to coordinate the exports of certain commodities. These would be over and above the established associations such as the Canadian Exporters' Association, Canadian Manufacturers' Association, etc., and would generally comprise both business and government representatives. Would such organizations accomplish anything? As one industrial executive suggests, "Canada is such a relatively small trader in most items and so hopelessly high in production costs that these group trading practises probably would be impractical and ineffective." Existing laws regarding combines would have to be amended. Perhaps, however, it would be in the national interest to consider domestic and export markets separately. It might be that free competition will have to be restricted to the domestic market but that, as a nation, we permit and indeed encourage businessmen to get together when doing business abroad. Whether the two could be successfully separated is another question.

It has also been suggested that business and government leaders attempt to instill in the public a sense of urgency and sacrifice. This suggestion arises from the dangers which could occur if the labour force and creative potential of another nation became greater than our own. Perhaps, also, it includes the desirability of controlling wage demands, strikes, inflation, etc. Undoubtedly our ability to continue to compete in world markets will, in some way, be tied to this suggestion. The problem, however, would seem to be whether or not in a society which has a high standard of living it is possible to sustain a "sense of urgency and sacrifice". The issue is probably quite meaningless to most of our population unless it can be realistically translated into something which does have meaning: wages, moral principles, the effects on children, or the like.

Should businessmen actively solicit Russian business? The question has already been discussed, but it forms such an important part of a direct "solution" that some elaboration seems necessary. Let us assume that, considering all the possible problems which could arise, the answer is yes. How could this be done? "Active" solicitation implies the investment of capital in market research, setting up a distribution system, sales training, etc. The Canadian businessman will not make this sort of investment unless the returns from the business expected will be as profitable as he could get elsewhere, or that the export business will provide some other service to his company, such as helping offset seasonal fluctuations. Business and the national interest come close together here. By the intelligent searching for the most stable customers who will offer the best price and provide the opportunity for the most efficient distribution, business and the Canadian nation will gain most.

A few of the other solutions that have been offered include increasing the number and effectiveness of international commodity agreements, lowering tariffs, formation of a free trade area with the United States or the United Kingdom or some other country or group of countries. These problems are mainly those of government.

CONCLUSION

In the long run and in the broadest sense, Russia's emergence as a major competitor in world markets poses a severe threat to Canadian industry. While Russia's trading activities are by no means entirely politically motivated, the political goal undoubtedly underlies many of her actions. But it is not the isolated instances of dumping, price-cutting or special deals that should concern us. It is the challenge we face in competing economically with a planned and centralized economy. For the first time, we of the west are facing the prospect of direct competition for world markets with a socialist state possessing substantial resources and ability. It promises to be a difficult and bitter fight.

One very obvious prescription for what we should do about the Russian economic offensive is to control inflation and improve productivity so that our products will be able to compete on world markets.

These suggestions have a hollow ring, however, unless by some miracle we can rediscover our sense of purpose. Harry and Bonaro Overstreet in their book *What We Must Know About Communism,* write about the communist concept of a "permanent revolution". Their suggestion is that communist ideology incorporates the idea of world domination through continuous revolution into any and every world situation: peaceful co-existence, hot war, cold war, etc. Have we a similarly single-minded objective or goal? Do we really believe in ourselves and our system?

These are important questions because, in essence, our system is being directly compared with theirs. In the field of international trade, the results will be there for all the world to see. The acceptance of Russian goods over Canadian or American by foreign customers is, in one sense, the acceptance of their system. And, if we can only fight them by doing what they do—for example, by industry-wide planning—is this not admitting that they can do it better?

These are hard questions. They are not pleasant either to face or to contemplate, but face them we must if we are to continue to play our traditional part in world trade.

SECRECY IN MANAGEMENT

It used to be an accepted prerogative of management to be secretive.

In fact, it was standard practice to maintain a wall of mystery from behind which decisions emerged at critical times with little or no explanation.

Today, such practice is decried, at least in theory, and certainly the average corporation is much more vocal internally and externally.

Nevertheless, this is probably still the greatest barrier in the communications system.

If you want good management judgment, good translation of your operating objectives, then the major effort must be devoted toward supplying information from the top down. We all know the problems of organizing the upward flow of information, but it is equally difficult to get information flowing downward with proper interpretations and emphasis.

There is a natural reluctance for top management to expose some of their concerns not only to the possibility of external leaks, but to misinterpretation at lower management levels.

In actual practice the gains so far outweigh the disadvantages that one wonders at one's initial reluctance.

—W. O. Twaits,
Executive Vice-President,
Imperial Oil Ltd.

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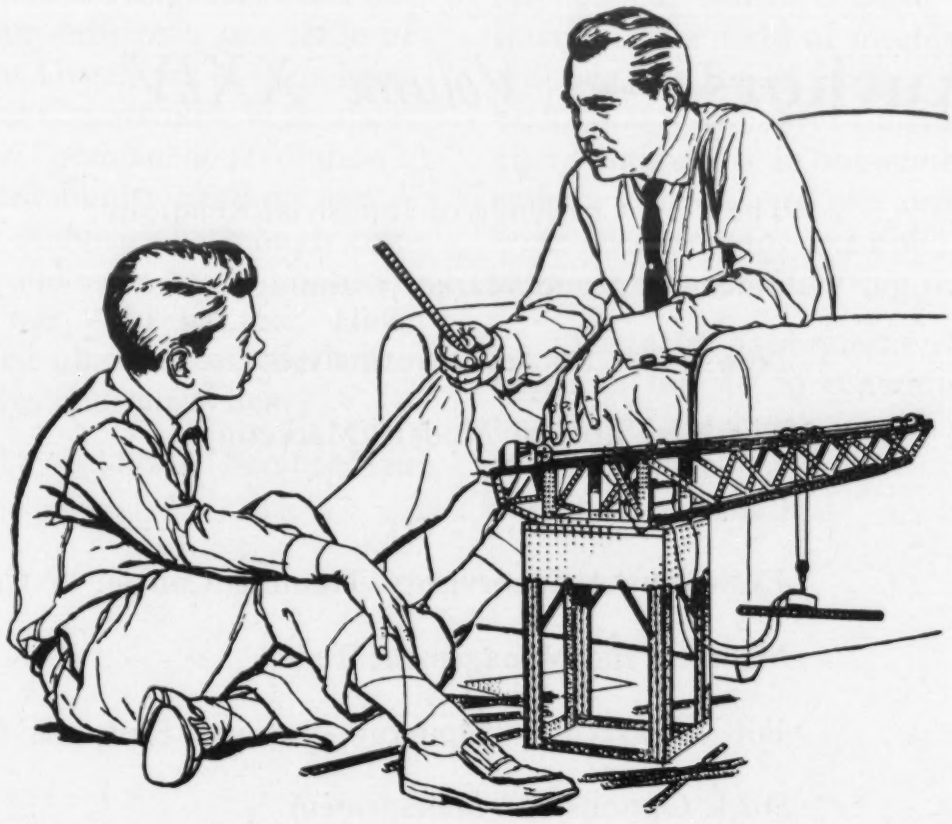

When the Men in the Family Get Together . .

Those private 'man-to-man' talks are precious moments. They are a time for talk and a time just for looking — to watch the development and curiosity of youth. In this country, there is much for a boy and his father to share. An awareness of the expansion and growth of Canada is a major opportunity . . . exciting to both young and old.

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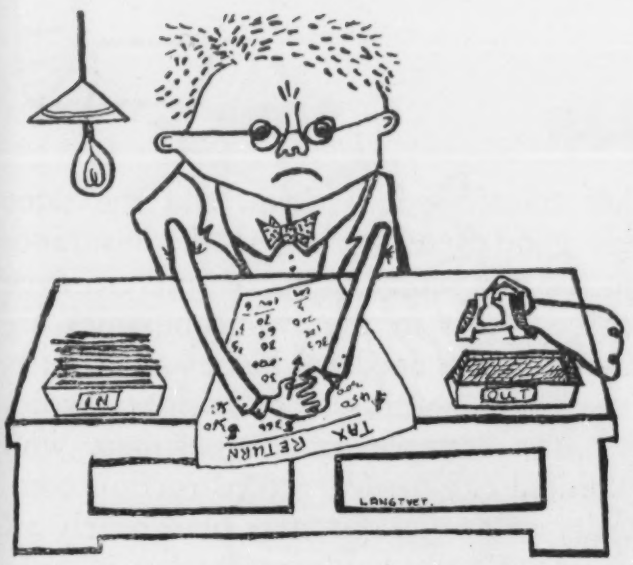


Canadian Taxation and the Businessman

K. W. LEMON, F.C.A.

In recent months the Canadian business community has given a great deal of consideration to the statutory amalgamation of corporations and the resulting effect on the taxation of corporate surpluses. The growing interest in this subject has given rise to a variety of opinions which merit careful study.

The Companies Acts of all but three of our provinces now provide for the amalgamation of two or more companies although the federal Companies Act does not contain any such provision. Generally speaking, this legislation permits companies incorporated in the same province to amalgamate their assets and businesses into one continuing company without any sale of assets and without winding-up any of the predecessor companies.

The existence of this legislation together with amendments made to The Income Tax Act in 1958 and 1959 appears to provide interesting possibilities to Canadian companies which have substantial accumulations of undistributed income or designated surplus. A 1958 amendment to the taxing statute sets out in some detail the consequences for tax purposes of a statutory amalgamation. This legislation made it clear that the total of the undistributed incomes accumulated by the predecessor corporations would be combined and carried forward into the successor corporation. It became apparent very quickly, however, that no prohibition or penalty was provided against the amalgamation of parent and subsidiary companies so as to eliminate the portion of the surplus of the subsidiary which had previously been designated (i.e. the surplus accumulated by the subsidiary prior to acquisition of control by the parent). Thus, on amalgamation of a parent and subsidiary company incorporated under the same provincial jurisdiction, while the total of the accumulated undistributed incomes would be carried forward into the combined company, the tax penalty previously imposed on the transfer of the designated surplus appears to be eliminated.

Following this line of thought, some taxpayers have concluded that, for this purpose, a parent company could be created where none existed before. If the shares of an existing operating company are then sold to the newly-created parent in return for redeemable preference shares of the new company, the stage is then set for an amalgamation of the two companies. Such an amalgamation would appear to make the accumulated surplus of the operating company available for withdrawal without tax consequence through the redemption of the preference shares of the amalgamated company. It is true that a 1959 amendment to the Income Tax Act applies a 20% penalty tax to such a transaction if the net assets of the amalgamated company are less than the combined net assets of the predecessor companies. Many tax consultants, however, have expressed the opinion that this penalty does not apply if preference shares rather than debt securities are issued by the parent company in exchange for the shares of the operating subsidiary.

In considering any application of statutory amalgamations, the Canadian businessman should realize that it is quite likely that there will be further amendments to the applicable sections of The Income Tax Act in 1960. Whether such amendments will be effective retroactively so as to levy a tax in respect of 1959 transactions is a matter which must be subject to considerable speculation. Cognizance should also be given to the possibility that certain amalgamations may be subject to attack on the grounds of artificiality. For these reasons, while statutory mergers may appear as an attractive method of dealing with corporate surpluses under present legislation, they should not be entered into without careful consideration of the degree of risk involved.

Canadian Law and the Businessman

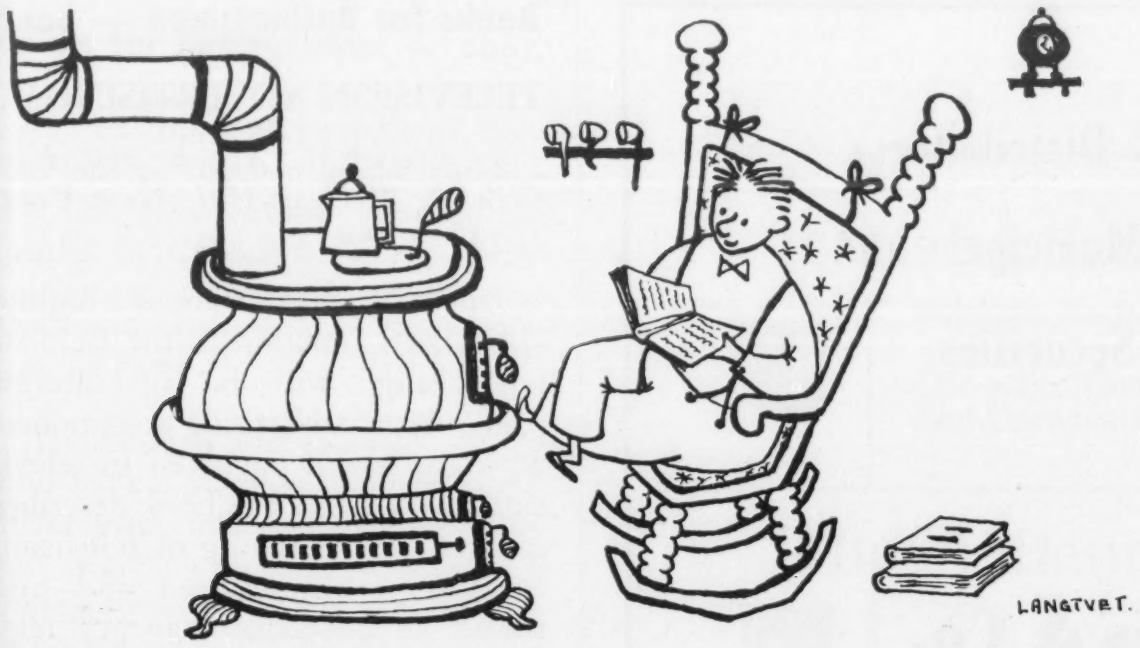
PETER V. V. BETTS

What happens to your automobile insurance on your death? Does it continue to "cover your car"? Suppose your wife is involved in an accident the next day—is she left without insurance? This would appear to be the result of Finlay v Global General Insurance Co. (1959) O.W.N. 309. In that case a policy was issued on the 14th June, 1957 and the owner died on the 10th January, 1958. The daughter continued to drive the car. An accident for which the daughter was responsible occurred on the 20th April, 1958, almost two months before the policy was due to expire. The company refused to pay the claim on the grounds that the policy terminated on the death of the owner on the 10th January, 1958.

The case is interesting in that it throws light on the nature of insurance contracts generally, and automobile insurance contracts in particular. Disregarding for the moment the collision feature, the insurance company undertakes to protect the owner from claims made against him by others for damage for which he is responsible. It is therefore a contract between a person and an insurance company. The car is only incidental as the means whereby the liability comes about. On the death of the owner, strictly speaking, the contract becomes impossible of performance. The agreement was to protect (the actual word used is "indemnify") a specified living person (not a dead man or his estate) and that person is not now in existence. The risk disappears with the death. The contract could, of course, be extended to cover the situation in Finlay v Global, but it should be noted even then that the risk would change somewhat on the death of the owner. The company would then be asked to indemnify the estate of the former owner or the devisee of the automobile who might be young, old, careless or an alcoholic. The company would probably still have to be given notice of the change of interest and given an opportunity to get off the risk. Contrary to popular misconception, automobile insurance does not insure an automobile, but rather it insures someone's potential liability arising out of the use of the automobile; similarly, fire insurance does not insure a house, but rather the interest of some specified person in that house. The distinction can be vital and is most clearly brought to light when ownership changes.

The resulting problem of change of interest in insurance is one which is too frequently overlooked by businessmen. During the process of avoiding (although never evading) the tax gatherer, new companies are constantly being created and assets of one sort or another transferred to them, and the same principle holds good here to release the insurance company from the risk on a change of interest, even though the shareholders in the two companies are the same. The companies need not be new, of course, and the case need have nothing to do with tax avoidance. Consider, for example, a businessman who operates two limited companies, a construction company and a realty company. He may own nearly all the common shares of both; however, the law is quite clear that each company is a separate legal entity. Let us suppose that our businessman, in the middle of the year, decides to switch one of his automobiles or the company airplane from the construction company to the realty company. He probably will remember to have the license changed, but it makes one shudder to think how frequently the insurance receives no consideration at all in transactions of this kind. Again, let us assume that he has just obtained a valuable stand of timber. Probably the first thing he will do is to "insure the trees" against loss by fire and other perils, probably by telephone and very likely in his own name, and then in due course the asset will be transferred to the realty company. But, how about the insurance? Too frequently it is forgotten completely. Our businessman did not insure the timber, he insured his interest in the timber and he no longer has any interest in the timber. He is simply continuing to pay a premium for nothing. The principle is one of general application and cuts a broad swath across the law of insurance and yet appears to be generally misunderstood.

For example, some time after the decision in Finlay v Global was published the following appeared in the press . . . . "Insurance on everything else (other than automobiles) owned by a private individual, such as a home, furniture or any goods and chattels is held on the articles themselves, not on the individual". Nothing could, of course, be more misleading. Consider for example the situation where husband and wife own a house jointly. Frequently the husband will arrange the insurance in an informal manner and in his own name. In the absence of a provision to the contrary, in the policy he has insured not the house, but only his interest in the house. In the typical case, then, the couple will receive only half their loss. Perhaps the nature of the contract should be changed, but until that is done businessmen would be well advised to notify their agent promptly of any change in interest affecting the policy. Insurance agents are nice fellows, but adjusters can be difficult.



BOOKS FOR THE BUSINESSMAN

Reviewed in this Issue		*Reviewer*
A STUDY IN LIQUIDITY	William A. Paton, Jr.	*Samuel A. Martin*
TELEVISION ADVERTISING	Clark M. Agnew, Neil O'Brien	*Donald H. Thain*
OPERATIONS RESEARCH	Maurice Sasieni, Arthur Yaspan, Lawrence Freidman	*Andrew Grindlay*
THE MANAGEMENT OF TIME	James McCoy	*R. E. Sproule*
WAGE INCENTIVES	J. Keith Louden, J. Wayne Deegan	*Andrew Grindlay*
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GENERAL ECONOMICS	T. J. Anderson, Jr., A. L. Gitlow, D. E. Diamond	*R. E. Sproule*

A STUDY IN LIQUIDITY

Michigan Business Studies, Volume XIV, No. 2, by William A. Paton, Jr. Published by Bureau of Business Research, School of Business Administration, University of Michigan, Ann Arbor, 1958. 176 pp., $5.00.

Speaking on the impact of inflation in 1958, the late Professor Sumner Slichter stated, "During the last three years, American corporation have overstated their profits by approximately $16.4 billion." *A Study in Liquidity*, written by Mr. Paton as a doctoral dissertation at the University of Michigan in 1954, is a scholarly investigation of the impact of inflation on certain "monetary" assets and liabilities appearing on the financial statements of 52 American corporations. The "monetary" assets consist almost entirely of cash, short-term receivables, and marketable securities; the "monetary" liabilities include both current and long-term liabilities. These short-term assets have received very little attention in recent literature pertaining to the subject of inflation, and this study is therefore a particularly important contribution.

The author uses indices derived from the Consumer's Price Index to convert the monetary items to a comparable base, and by this procedure is able to ascertain the loss on monetary assets in each of the sample companies from the years 1940 to 1952.

Mr. Paton draws conclusions about individual company patterns as well as aggregate monetary fund patterns. Complete tabulations show the detailed calculations of the short-term monetary items for the 52 individual companies. The author states, "The effect of the short-term liability is to offset partially the loss sustained on cash; the debt serves as a hedge. And the larger the short-term debt is in relation to the monetary assets, the more successfully has the company hedged. It appears that corporate management has given insufficient attention to the impact of inflation on the monetary fund—the desire for liquidity was so strong that companies were willing to sustain very substantial losses in order to maintain this liquidity." The median average loss rate for the 52 companies is between 5.4% and 5.5% annually.

Of the non-financial corporations analyzed in order to determine the impact of inflation on the long-term debt, each of the companies showed substantial gains on the long-term debt over the 1940-52 period.

Mr. Paton's study contains much valuable data on a topic of timely interest to all businessmen. Financial officers and accountants in particular will find Mr. Paton's conclusions worthwhile reading.

Samuel A. Martin,
Lecturer in Business Administration,
U.W.O.

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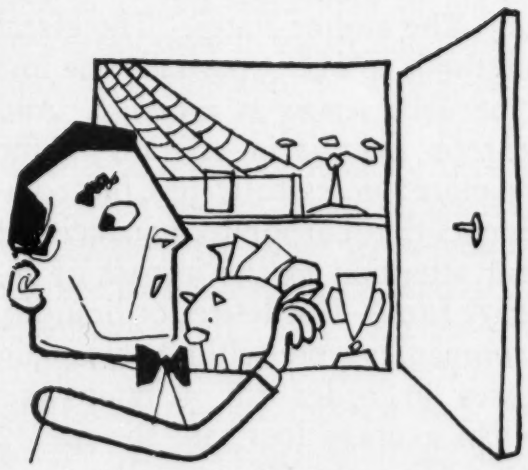

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Books for Businessmen — cont.

TELEVISION ADVERTISING

by Clark M. Agnew and Neil O'Brien, McGraw-Hill, New York, 1959. 330 pp., $10.95.

This book, written about a highly-specialized function in the field of advertising, will be of interest primarily to advertising practitioners who are deeply involved in television operations. The book describes in detail the planning of television campaigns, organization and personnel of advertising agency television departments, television advertising research, television commercial and jingle writing and production, storyboard creation, live and film commercial production operations, and other subjects related to the creation and use of television advertising.

This book is one of a series by McGraw-Hill on television advertising and broadcasting. It is recommended to all who have a specific need for a broad but practical description of the personnel, planning, procedures, techniques, material, and equipment involved in producing television commercials and programs.

Donald H. Thain,
Associate Professor,
U.W.O.

OPERATIONS RESEARCH

by Maurice Sasieni, Arthur Yaspan and Lawrence Friedman. John Wiley & Sons, Inc., New York, 1959. 316 pp., $10.25.

No longer startling is the statement that management people are relying more and more on mathematics. The potentialities of mathematics are accepted as common knowledge, along with the fact that far too few managers know much about it.

In this book the authors explain some of the basic tools of Operations Research and show, with the

use of examples and problems, how they can be used in modern industry. The three authors were on the faculty of Case Institute of Technology at Cleveland, where this book grew from a need for a basic text in O.R.

The book is addressed to readers who have a working knowledge of differential and integral calculus, and begins with a brief survey of the elements of probability theory, sampling and simulated sampling. It then presents various problem areas which have gradually taken shape in Operations Research, including inventory, replacement, waiting lines, competitive strategies, allocation, sequencing and the newly-developed dynamic programming.

To readers whose formal mathematics training terminated at high school or before, the authors have this word of encouragement:

> "Mathematical sophistication, although frequently necessary, has no merit *per se*. Although a great deal of elegant mathematics appears in the literature, far more problems have been solved by the intelligent application of simple arithmetic."

Nevertheless, this book does present in clear, concise terms a description of several mathematical techniques that are available to help management to maximize profit. It is not difficult to read, and the problems are interesting, but it does require study for full comprehension. It is a book that anyone interested in O.R. will find not only highly educational but excellent as a reference to which he may refer.

Andrew Grindlay,
Instructor in Business Administration,
U.W.O.

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THE MANAGEMENT OF TIME

by James McCay. Prentice-Hall, Inc., New York, 1959. 178 pp., $3.50.

An erstwhile chemical engineer, purchasing agent, salesman and manager-turned-executive-consultant, Mr. McCay offers a refreshing addition to the crowded "how-to-do-it" bookshelf.

In his association with Dr. D. J. S. Bois (Bois, McCay and Associates of Montreal), the author has explored with some 600 managers a range of methods and procedures for accelerating personal growth both on and off the job.

The results, constituting the basis of this book, leave little doubt in his mind that all of us can make jumps of several hundred per cent in our personal effectiveness.

The man of the hour is seen as one who can handle the complex problems created by the increasing speed of innovation. He is a man of exceptional originality who has disciplined himself to keep acquiring new knowledge and skills.

This man must spend some part of every day in self-development; to find some way to beat the pressures of time, organizing himself to multiply his effective output.

With the principles of selectivity and delegation as a base, Mr. McCay proceeds to show how the executive can make fuller use of his precious time, not by any formula, but rather by a sharpening of his intuitive and perceptive senses. He demonstrates very vividly how one can increase his alertness, available energy, knowledge and range of experience.

The principal foe, McCay asserts, is preoccupation. One must constantly strive to be more alert, giving full attention to what is going on. Any moment one is preoccupied or acting habitually is a moment one is not free to manage his time.

To combat preoccupation one can employ three principal weapons: a change in routine, a daily period of practise, and the cultivation of interests centered about observation. All are well exemplified in the book.

The author also wages war against the negative states of mind that rob us of vital energy and initiative, and he shows ways to locate energy losses and plan one's own energy conservation program.

An interesting chapter entitled "Invest in Growth" examines the development of personal resources under five headings — exploring, training, conforming, sleeping and idling.

It is difficult to give substance to these terms without borrowing at length from the richness of Mr. McCay's experience, which a review of this nature will not permit. He deals at length with the problem of knowing when to stop and reconsider a problem, and where to proceed from that point. There is an interesting section on the use of diagrams, another on selective reading.

In summary the author offers a master plan for total personal development which could bear careful scrutiny by any business executive.

This short, readable, thought-provoking book is highly recommended. There are very few of us who cannot afford some time each day to sharpen our effectiveness through better control of our time, which will concurrently enable us to live a richer, fuller life and accomplish more in less time than we ever have before.

R. E .Sproule,
Instructor in Business Administration,
U.W.O.

WAGE INCENTIVES,

Second Edition

by J. Keith Louden and J. Wayne Deegan, John Wiley & Sons, Inc., New York, 1959. 227 pp., $7.00.

Giving broad coverage to incentive systems, their strengths and weaknesses, this book can be very helpful to the executive who is thrust into an incentive situation with little knowledge of such schemes.

The authors (both industrial engineers) point out that the true purpose of a wage incentive plan is to sustain the goals reached through proper layouts, proper work methods, proper equipment and well-trained employees. They emphasize throughout the book that before any incentive plan can be considered, the methods of performing the jobs must be standardized and that a standard time for a job, once established, must not be subject to bargaining or negotiating.

Spoilage, quality and material usage must also be considered, for without their effective control any incentive system is doomed to failure.

The greatest element in employee resistance to incentives, state the authors, is fear—mostly fear of the unknown. The matter of developing employee attitudes that are receptive to incentive operation is a real challenge in the whole area of employee education and training.

"Wage Incentives" outlines six basic incentive plans with a short discussion of each. It lists 11 requirements of a sound wage incentive plan, and concludes with a chapter on incentives for service operations and one on incentives for supervisory personnel.

The executive who is in a position that requires him to have a working knowledge of the fundamentals and practices of wage incentive systems, will find "Wage

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Incentives" by Louden and Deegan a helpful and interesting book.

Andrew Grindlay,
Instructor in Business
Administration, U.W.O.

UNIONS IN AMERICA — A British View

by B. C. Roberts, Industrial Relations Section, Princeton, New Jersey, 1959. 136 pp., $2.00.

The significance of the time-worn adage, "can't see the forest for the trees", is vividly illustrated in this short, cogent and provoking treatise.

Professor Roberts is a Reader in Industrial Relations at the London School of Economics and Political Science, currently visiting Associate Professor at Princeton University.

In clearing a straight path through the plethora of censure levelled at American unionism, the author has seen fit to examine six areas of contention — the structure of union organization, union democracy, corruption, wage bargaining and the control of inflation, the climate of industrial relations, and unions and politics.

He traces the growth of the American union movement in comparison to that of Britain and heavily industrialized European nations, pointing out interesting similarities, differences and advantages of the varying ideologies.

However, his deliberations are not a mere chronological account of growth, but rather a penetrating analysis of the structure, motivation and mores of American unions and American society, calculated to provoke readers into varying states of reflection, irritation, disbelief or rage.

As Professor Roberts sees it, the impetus of technological improvement will see a tremendous increase in the number of white collar workers at the expense of the blue

collar workers. Present American unions are almost all blue collar in their ideology and structure and do not seem to recognize essential differences in the makeup of each group. It will be necessary to develop a new type of organization that is part union, part professional association to appeal to the clerk and technician.

As a firm admirer of the omnipresence of opposition and free thought in the American political arena, the author finds the normal autocracy of American unionism paradoxical indeed. The unions' fear that abandonment of compulsory membership would inevitably lead to dire consequences ought to be put to a proper test, he asserts. If it proved to have any serious validity, then it would be necessary to reconsider the situation.

In the matter of corruption, Professor Roberts invites collective censure by proclaiming—"Corruption is deeply imbedded in the political and commercial life of America, and so far it has not been possible to root it out. In these circumstances, it would be truly surprising if the unions, which of necessity operate within the sphere of business and politics, had not been infected."

Collective bargaining has been further developed in the United States than in any other country, and for that reason unions have often been accused of forcing management to set off a new spiral of inflation through wage increases and fringe benefits. "Whatever pressures unions exert," states Roberts, "they are only one factor in a chain of events that requires the participation of others before the full effect of an inflationary increase in price occurs."

Although American unions have taken collective bargaining much further than most European unions, American management appears to

(continued on next page)

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be far more determined to maintain its past prerogatives than management in Europe.

Although some of the author's assertions may be construed as socialistic, he nevertheless opens the door on several disturbing vistas of thought which have too long been ignored or avoided.

Many management readers will disagree violently with the central issues of Professor Roberts' book, but none can argue that he has not given a penetrating appraisal of the ills that beset American labour.

R. E. Sproule,
Instructor in Business Administration,
U.W.O.

GENERAL ECONOMICS:
A Book of Readings

by T. J. Anderson Jr., A. L. Gitlow and D. E. Diamond. Richard D. Irwin, Inc., Homewood, Illinois, 1959. 487 pp., $7.25.

The authors, all on the economics staff of New York University, have compiled an admirable array of basic readings—not only, as they avow, for the student of economics at a university, but for the lay reader as well.

Considerable thought has been devoted to the achievement of a broad and balanced coverage of major topics normally included in a general economics course. The nine major divisions—fundamental concepts; money and the price level; aggregate economic activity; economic growth; market pricing of goods and services; sharing of goods and services; international economic relations; the public economy; ideological alternatives; communism and democratic socialism—are organized to achieve coherence and a logical flow of ideas.

Comprehensibility is the keynote, yet depth of penetration has not been sacrificed. What economists

can and cannot do is well defined at the outset.

This reviewer feels that perhaps the cardinal virtue of the undertaking is the care with which the authors have chosen relevant opposing viewpoints on controversial questions. For example, the businessman vitally concerned with the question of creeping inflation would do well to consider the battle of opposing forces led by Sumner H. Slichter on the one hand and Neil H. Jacoby on the other, as outlined in the two short articles included.

R. A. Radford presents a fascinating paraphrase on the market mechanism in "A Prisoner-of-War Camp", wherein cigarettes become the basis of an active and volatile "economy".

The developmental problems faced by the economies of Russia Red China and India are discussed.

George F. Break of the University of California and Crawford Greenewalt of duPont are vitally concerned with the effects of taxation on work incentives and executive motivation, presenting views that are hardly in agreement.

The progress of both communist and socialist ideology is evaluated in the setting of political, social, and economic decisions, which feature immediate results at the expense of long-term objectives.

Studying this volume will not make any *Business Quarterly* reader even a pseudo-economist. What it will do is elicit some fundamental thinking on the part of the businessman about the importance of considering the economic implications of his deliberations and decisions.

R. E. Sproule,
Instructor in Business Administration,
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